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COUNTRY GUIDE

Vol. 83, No. 3 — MARCH 1964

THE FARM MAGAZINE

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GWEN LESLIE

In This Issue

If you are interested in the most contentious issue in the prairies today—livestock marketing—you won't want to miss the editorial page this month. On it is a discussion of the Shewman Committee's report. This report pinpoints the weaknesses of hog marketing, particularly in Manitoba, although many of the points made apply to other areas as well. It suggests ways to improve the situation too. We think you'll be hearing a lot more of this report in the months ahead.

On page 15, Cliff Faulkner describes the fight one farmer had to save his land in the face of expropriation. It's a story that could hit close to the hearts of many farmers.

You'll find on page 18, the story of how two farmers beat the weather at haying time each year. And for an up-to-date report on Chemical Weed Control turn to page 45.

Oh yes, you'll also notice a change in our department heads this month. We think this will make the pages easier to read. We hope it will save you time in this and succeeding months, as you read through your copy of Country Guide.

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COVER: Cattle carrying the I brand ford the Highwood River in Alberta—from a painting by Bert Smith.

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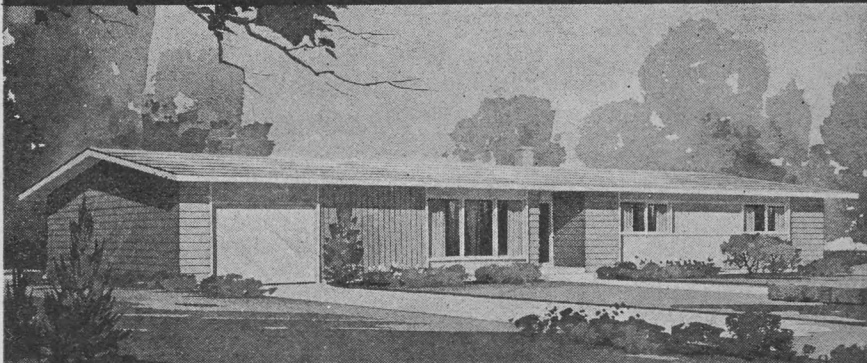
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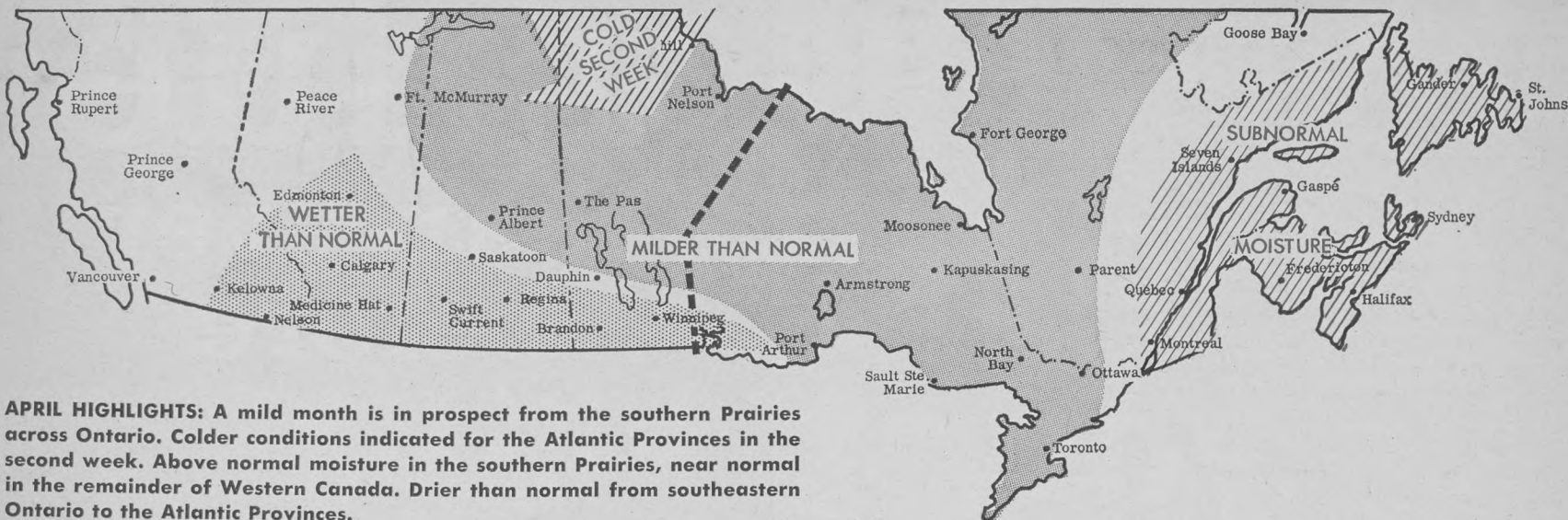
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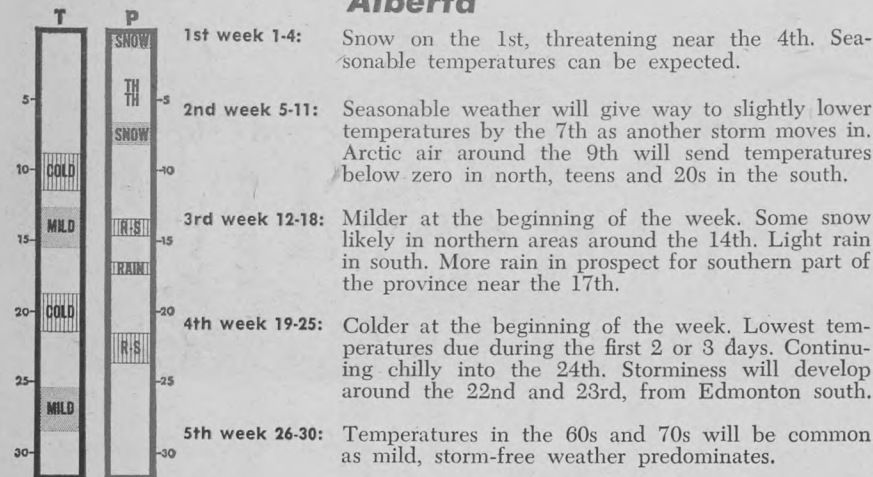


APRIL HIGHLIGHTS: A mild month is in prospect from the southern Prairies across Ontario. Colder conditions indicated for the Atlantic Provinces in the second week. Above normal moisture in the southern Prairies, near normal in the remainder of Western Canada. Drier than normal from southeastern Ontario to the Atlantic Provinces.

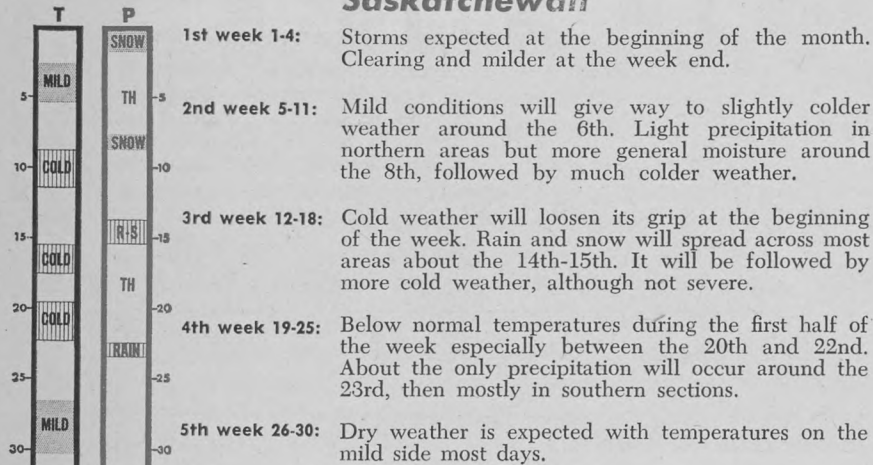
APRIL 1964

(Allow a day or two either way in using this forecast. It should be 75 per cent right for your area, but not necessarily for your farm.—Ed.)

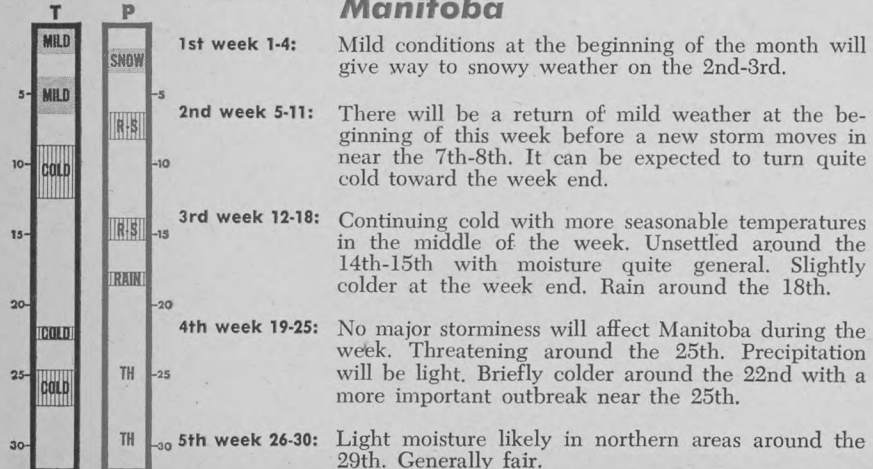
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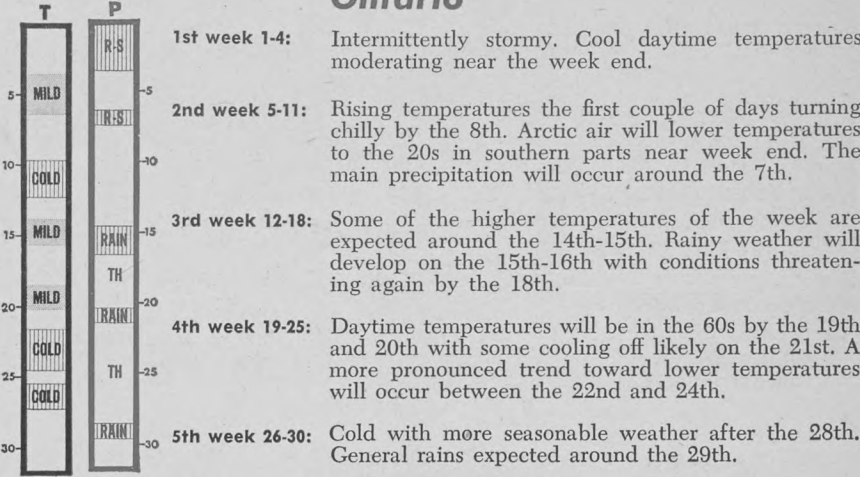
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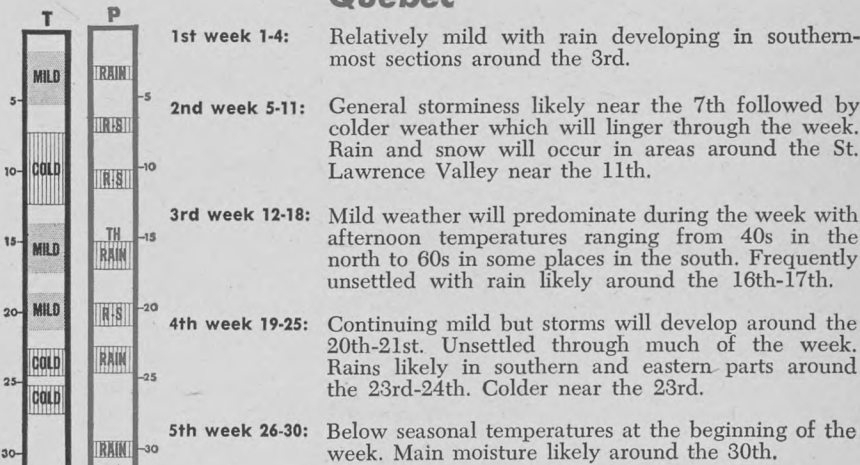
Manitoba



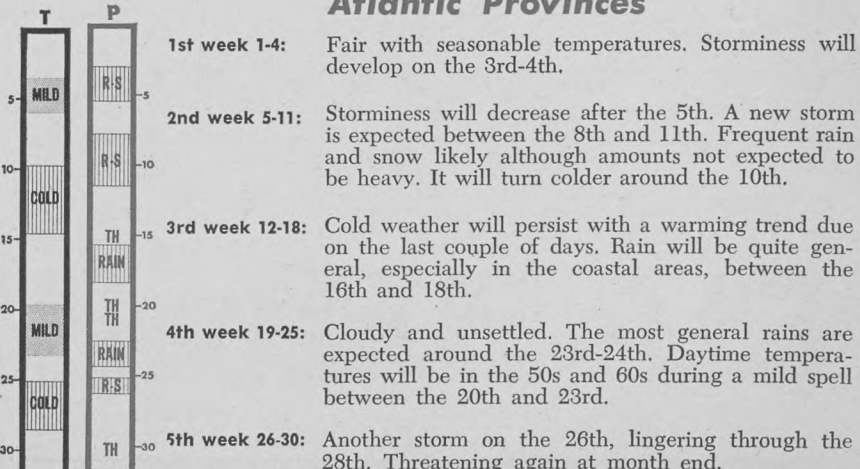
Ontario



Quebec



Atlantic Provinces



Key to Abbreviations: T, temperature; P, precipitation; CL, cooler; WM, warmer; TH, threatening; SH, showers; R-S, rain or snow.

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A Fresh Look at the Hog Market

ONE of the most significant documents to come before agriculture in years has been presented in Manitoba and it could hardly have arrived at a more opportune time. It concerns livestock marketing, and it arrives when confusion is the hallmark of the livestock marketing system. A great public debate about hog marketing in the prairies and the possible need for a marketing board is in full swing. It has now become apparent that producers are divided among themselves as to what should be done regarding hog marketing.

The document is the Shewman Report on Livestock Marketing. In effect, it amounts to an important pulse-taking of what the livestock producers in Manitoba think and feel about their present marketing system for livestock and particularly about hogs. It is a thoughtful and detailed appraisal of the complaints being made about the present system, and a realistic look at alternative methods of marketing.

The report offers what should be conclusive proof to anyone who reads it that blind faith in the present hog marketing system is not enough. Producers across the prairies, and across the country too, may or may not agree with the conclusions reached or with the recommendations made by the commission; they can scarcely doubt after reading it, that the time has come to make some fundamental changes in hog marketing.

It was in April 1961 that the Manitoba Legislature established a Committee of the House under the chairmanship of Mr. Harry Shewman, M.L.A. for Morris, to study and inquire into all phases of the livestock marketing system in Manitoba. During its 3 years of work, that committee heard presentations from dozens of producers and producer groups in its own province; it visited several other provinces and even went to the United States to study livestock marketing systems in existence there. Its report is a comprehensive 265-page document.

How Hogs Are Sold

The Committee reports that hogs are now marketed in Manitoba by one of two methods. They are sold direct to packing plants or else they are sold through terminal markets. It pointed out that it is the big packers who get most of their hogs direct from the farmers or through agents operating on the farmers' behalf.

The report notes that buyers who come to the farm usually have more skill and knowledge than the producer who is trying to sell his own stock there. It states that sales through the packer buying stations are one of the least satisfactory methods of all for producers to use. It notes that direct-to-plant selling often means a bonus to shippers or truckers in which producers may not share; that truckers are licensed to serve specific areas so that producers don't necessarily have freedom of choice in selecting the trucker to represent them; and that it is extremely difficult for the public market today to compete with direct marketing channels for there may be delays and added costs of marketing livestock through the public market. Finally, the report states that it is the direct channels that attract patronage because of their lower costs, although these channels rely on the public market to provide a guide to price levels.

The Shewman Committee notes that during its hearings some of the smaller processors

criticized the lack of competitive bidding on hogs in the market place, and said they couldn't get enough hogs no matter what they did. Indicating that the hog market is anything but free, one processor stated that in order to get hogs, he had to either establish a deal with truckers or establish a relationship with a commission agent.

An Obsolete Market

In appraising the present marketing system, the Committee noted that it was designed at a time when rail transportation was the dominant force in assembling livestock. But times have changed.

In explaining the functions of any market, the Committee suggested that production and marketing functions are interdependent—that you can't have efficient production without efficient marketing. It said that the marketing system must tell farmers what to produce, how much to produce and where to produce it. It indicated that at the present time the marketing system is not performing this job as well as it might.

Having said this, it attempted to lay down the specifications for a suitable livestock marketing system. The Committee suggested that it must be not only competitive; it must also

Copies of the Shewman Report are available from the Queen's Printer, Winnipeg, Man., for \$3.00. Summaries are available free from agricultural representatives in the province, or from the Economics and Publications Branch, Manitoba Department of Agriculture, Winnipeg, to anyone who is interested.

The Country Guide recommends that anyone who is interested in the subject would be well advised to get a copy of the summary, at least, and read it carefully. ✓

be an inexpensive system of marketing livestock; it must get the livestock to market quickly and conveniently; and it must return to producers equal prices for equal products.

The Committee came to the conclusion that the most likely channel for producers to follow is one which enables them to sell direct to packers since it is quick and efficient. It hastens to add that this must be through a skilled intermediary so that the producers can retain satisfactory bargaining power.

A Teletype Auction

What about a teletype system in Manitoba? States the Shewman Report: This wouldn't require a complex assembly yard system such as is in operation in Ontario. The only packing plants are located in Winnipeg. They are not scattered through the province. At such time as a new packing plant is opened at Brandon the assembly yard system could be expanded somewhat.

In fact, said the Commission, a teletype system could serve to establish price and to do it better than the terminal market does it today.

In the view of the Shewman Committee, the most effective marketing system of all might well be a compulsory teletype selling system. It would assure maximum competitiveness in the market and it would assure the largest possible volume and the lowest costs per animal. The processing industry had indi-

cated that it was of neutral opinion on the idea. Some smaller packers distinctly favored such a system, believing it would give them a chance to get an adequate volume of livestock. One processor felt that such a change was essential to the survival of a firm like his own. Another noted that his firm was prepared to compete on a basis of price. There was indication from larger packers too that they felt this centralization of marketing would simplify their buying.

Despite this, the Committee goes on to point out that many producers may well prefer to retain their right to market their hogs through other channels. Their preferences, it said, should receive consideration.

A Hog Marketing Commission

It is for this reason, undoubtedly, that the Committee finally recommended a voluntary teletype system. It notes that even the opponents of a compulsory marketing system recognize the need to maintain a competitive market. Since the Committee agrees that a competitive market is essential, it recommends that a hog marketing commission be established under provincial legislation for the purpose of operating the public hog marketing system, and providing a markets information service. In effect, the Shewman Committee came to the conclusion that the welfare of all producers and in fact the welfare of the public of Manitoba is involved in this question of a satisfactory marketing system. As a result, it recommended that this proposed commission be financed through a levy of 20 cents per hog to be collected at time of sale on all hogs marketed and slaughtered in Manitoba regardless of their point of origin. With every hog producer helping to finance a marketing system, the Shewman Committee preferred to leave each producer the choice of marketing his hogs in any way he pleased.

Further, the report recommended that transporters of all slaughter hogs produced in Manitoba be required to obtain clearance of all shipments of slaughter hogs from the office of the commission by providing information on the number and source of the hogs and proof of the consignment to the destination chosen by the shipper. It went further and recommended that all buyers of slaughter hogs be required to report to the commission daily the number of Manitoba hogs purchased other than by teletype and the prices paid for them.

Could Include Cattle, Sheep

In recommending that a commission be set up, it suggests that this could best be operated as a public utility since it would be providing essentially a public service. It says that a provincial hog marketing commission appointed by the government could, of course, have producer representation if the government decided this were necessary or desirable. It goes on to say that a teletype auction for hogs, operated by a public commission, could be readily expanded to provide a similar service for cattle and sheep on an experimental basis. These classes of livestock could be offered for sale by teletype on a rail grade basis in the same way as hogs are now sold in Ontario.

Having explained the Shewman Committee's report, the Country Guide offers this further comment.

It has become apparent to everyone in the prairies in recent weeks that there are still many farm people vigorously opposed to the idea of a compulsory marketing board for hogs. If it proves unwise to establish a marketing board in Manitoba at this time, the Shewman recommendations may represent an acceptable alternative.

The report will undoubtedly be studied carefully by the government of Manitoba. If it chooses to act on these recommendations, hog producers across the country will watch with interest the results of its experiment. ✓

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Pests and Predators Haunt Stockgrowers

At the Western Stockgrowers' Association's 68th annual convention held in Calgary, eight out of 14 resolutions had to do with the control of pests and predators, both human and otherwise. Three of them had to do with human predators, long known by the colorful name of cattle rustlers. All resolutions were passed.

The first "rustler" resolution asked that R.C.M.P. patrols, which have proved very effective in areas where applied, should be extended into other areas, particularly during hunting season. Another requested the Alberta government to make bills of lading mandatory for all trucks moving livestock as a further deterrent to cattle thieves. The third states that: "Whereas cattle may move without inspection to some destinations in Saskatchewan, and whereas this aids and abets rustlers, therefore be it resolved that the Alberta Minister of Agriculture be requested to continue to press for complete brand inspection throughout the province of Saskatchewan."

It was also requested that coyotes, cougar and timber wolves be classified as predators and that no restrictions be placed on the hunting of

them by normal means anywhere in Alberta.

Pests that stockmen would like to see controlled or eliminated also include both human and non-human species. The non-human pest is the pocket gopher. He is charged with lowering forage yields, depletion of native range, causing harmful changes in native plant associations, the loss of soil through wind and water erosion, and generally adding to the costs of ranch operation—in fact, all the ills usually associated with poor farm management. It was asked that Federal and Provincial research institutions find some biological, or other effective measures, to check this little varmint before he completely sabotages the beef industry. Study was also asked of a virus pneumonia disease which is causing heavy losses in shipments of Western calves.

Human pests include grazing lease trespassers, hunters who start range fires and land expropriators who grab private land for highways, power lines and industrial projects, then take their time about settling up. Because the Petty Trespass Act affords no protection to grazing lease holders, a resolution requested

that said holders get the same protection as an owner or lessee of privately owned property. Another said the insurance scheme of "Crop Loss by Wildlife" should be broadened to include loss of grass and other real property by fires caused by hunters. A "Pay-as-You-Grab" policy was advocated for land expropriators so the victim would receive compensation before bulldozers showed up at his front door.

There were two resolutions involving roads. One requested the Provincial government to pass legislation so that highway safety involving cattle on the roads would rest on all who use the roads and not just on cattle owners. The other asked that a landowner adjoining unimproved roads be permitted to fence across the road allowance, so he can graze animals there, providing necessary gates are installed.

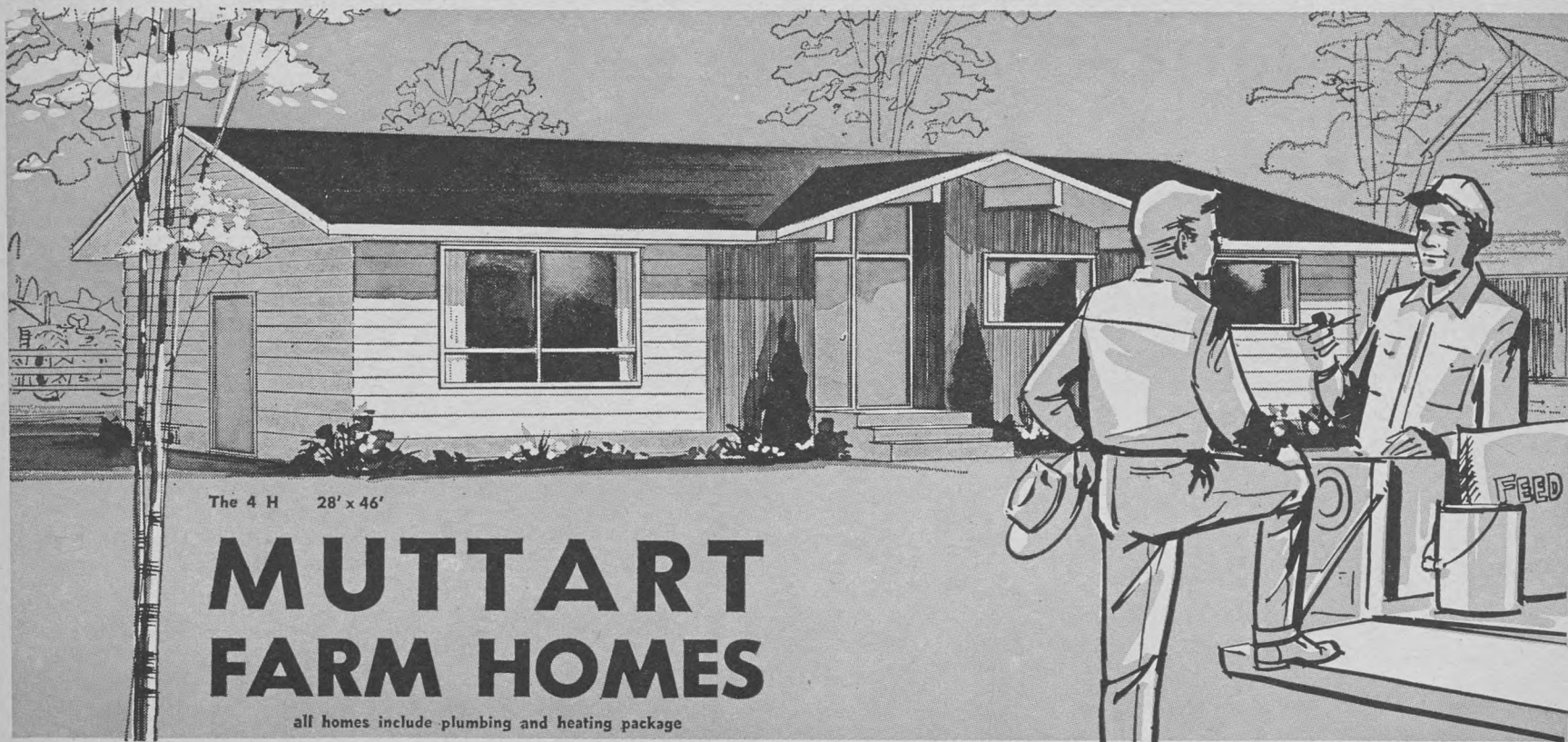
The perennial resolution on the Horned Cattle penalty had a new twist this year. Instead of asking that the penalty be abolished, the resolution requested that regulations be changed so the tax would apply to all cattle 250 lb. and over, instead of 400 lb. and over as is now the case. Under present regulations, too

many cattlemen are neglecting to dehorn their calves soon after birth, when it can be done with ease and safety, because they intend to sell the animals before they reach 400 lb. The dehorning task is therefore passed on to the new owner who must either leave the horns on and pay the tax, or dehorn at a time when the animal will suffer a good deal of stress and loss of body weight. Another long-time resolution, that the W.S.G.A. reaffirm its opposition to compulsory marketing boards, was passed with an overwhelming vote. Only one lone cowhand was raised in protest out of several hundred delegates present.

Speakers included Dr. M. E. Ensminger, Clovis, Calif.; Dr. J. N. Wiltbank, Crawford, Nebr.; Dr. A. J. Wood, University of B.C.; and Dr. Alex Johnston, Lethbridge, Alta. W.S.G.A. manager Eion Chisholm gave a report on the annual convention of the American National Cattlemen's Association, held recently in Memphis, Tenn.

The Association retained George Ross, Manyberries, as president; Clarence Copithorne, Cochrane, 1st vice-president, and Frank Gattey, Consort, as 2nd vice-president. Next year's convention will be held in Medicine Hat.—C.V.F.

(Please turn to page 13)



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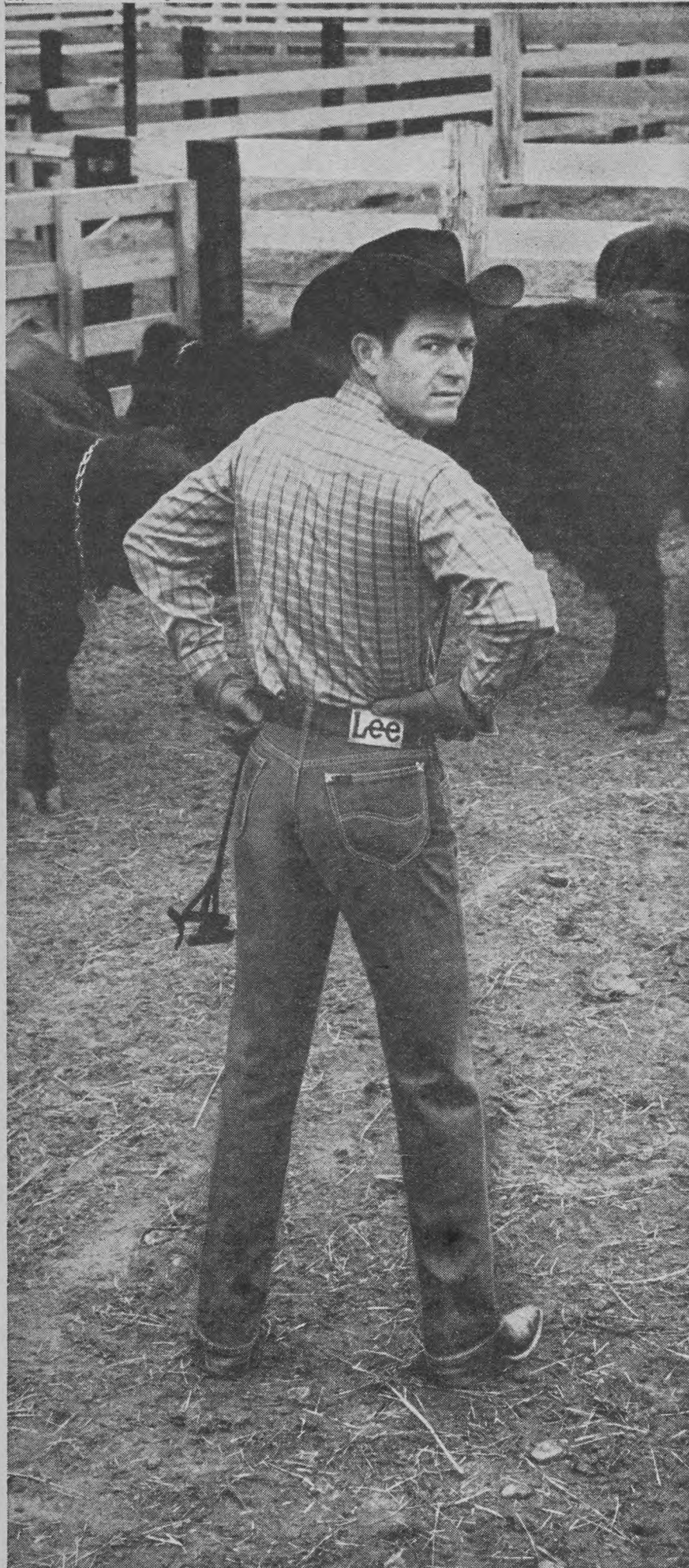
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GUIDE POSTS

UP-TO-DATE
FARM MARKET
FORECASTS

CANADIANS ATE more red meats and poultry than ever before in 1963. With business activity and employment at a high level in both Canada and the United States this year, demand for meat and poultry should continue to rise.

GOOD SLAUGHTER CATTLE should sell at higher prices in the next 6 months as Canadian prices follow expected American price rise. Continued heavy consumption of beef by Canadians makes large exports of finished cattle unlikely.

U.S. HOG MARKETINGS from April to year-end will run well below last year with fall supply the lowest in years. This should increase American hog prices appreciably and improves the outlook for the larger Canadian hog marketings expected in this period.

BROILER PRODUCTION shows no sign of let-up despite price reductions from last year. Unless substantial export markets are found, profit margins for broiler producers will be much smaller in 1964.

EGG PRODUCTION running above last year. Breaking plants helped maintain prices as they rebuilt their low stocks. As breaker stocks reach normal or supplies of lower grades increase, price reductions on top grades lie ahead.

WHEAT EXPORTS running on or ahead of schedule for Russian contract with commitments to regular customers being met. Still important to fill delivery quotas as available.

DURUM WHEAT EXPORTS good and home sales normal. Year-end carryover will be heavy and a further reduction in durum acreage appears in order.

BARLEY EXPORTS--particularly malting barleys--running well ahead of last year. Reflects ample supplies of required quality available.

RAPESEED DEMAND continues good with prices more favorable than year ago. Prospects are for continuing export demand, provided Canada can be reliable supplier--both as to quantity and quality. Producers can help by avoiding big jumps or drops in acreage seeded.

HIGHER WHOLESALE AND RETAIL TURKEY PRICES, particularly for heavy birds, resulting from smaller storage stocks. Little of this goes to growers who in planning 1964 production would do well to remember prices in fall of 1963.

News Highlights . . . at a glance

(Continued from page 11)

Prof. Hadley Van Vliet of the University of Saskatchewan has warned Western agriculture against overproduction of wheat. He stated that the Russian demand was brought about by a 30 per cent drop in that country's production due to climatic conditions, and that this could not be expected to last beyond the 3-year contract period. He looked to Russia to re-enter the export market after that time.

Dr. W. A. Jenkins, who has been director of Immigration and Land Settlement and director of ARDA in Nova Scotia, has been appointed principal of the Nova Scotia Agricultural College to succeed Prof. Ken Cox who is superannuating.

"Look for a common market of North America, Central America and South America to develop in the near future." This is the prediction of Earl Shulz, secretary-treasurer of the Guernsey Cattle Breeders Association of Ontario. Mr. Shulz, a former American university professor, has just returned from an extensive trip throughout Central and South America. He states that countries there could be excellent trading partners for Canada.

According to the United States Department of Agriculture, North America is emerging as the bread basket of the world. Prewar net grain exports were 5 million tons or 22 per cent of the world total of net regional exports. In 1960-61 these had risen to 39 million tons or 86 per cent of the world total. Present trends indicate net exports of 58 million tons in 1980 and 94 million by 2000.

Dr. Claude Hudson has been appointed director-general, Economics, of the Canada Department of Agriculture. He succeeds A. H. Turner who last year was appointed Deputy Minister of Agriculture for British Columbia.

Seventy per cent of the jobs in Canada are available to trained workers, according to Harold Tangjer, supervisor, Vocational Agriculture for the Saskatchewan Government. As a result, says Mr. Tangjer, students who drop out of school without completing high school education may get jobs which hold very little future for them. He said that in terms of a person's lifetime earnings, each high school graduate completed would represent about \$11,000 additional income.

The Canadian slaughtering and meat packing industry is faced with a problem of having more capacity than present livestock supplies require, says H. K. Leckie, general manager of the Meat Packers Council of Canada. Consequently, the resulting competition for livestock supplies has created a real cost-price squeeze for the packer.

Membership in the Canadian Aberdeen - Angus Association increased by 133 during 1963 to a total of 2,020, the highest ever recorded. Registration of Angus

reached 16,149, a substantial increase over 1962, while transfers total 12,479, another all-time high.

Western farmers were cautioned by J. R. A. Robinson, out-going president of the Meat Packers Council, not to let present market opportunities push them overboard in grain production. Mr. Robinson stated that one has only to look at the past years to realize the fallacy of a full grain economy. Poor crops happen and export markets can disappear, particularly when they are founded partially upon crop failures in other parts of the world.

It is reported that crop insurance legislation for Alberta will go to the provincial legislature this spring. The Alberta plan, it is said, would come under the plan implemented by the Federal Government a few years ago, under which the latter government pays 50 per cent of administration costs and 20 per cent of the premiums. Saskatchewan, Manitoba and Prince Edward Island already have crop insurance programs in operation under this arrangement.

Three soil scientists at the University of Saskatchewan say that production of cereal grains in the province could be increased 45 per cent by the use of better soil management and more extensive use of fertilizers.

In the past 2 years, 69 meat processing plants came under inspection by the Health of Animals Branch, Canada Department of Agriculture, boosting the total to a record 283 and increasing the volume of federally inspected meat by more than 10 per cent. Ninety per cent of all meat in Canada is now inspected by federal veterinarians.

The Manitoba Government in its throne speech promises the following action in agriculture: (1) a significantly expanded program of ground water explorations plus detailed investigation of irrigation possibilities in southwest Manitoba. (2) New land use and fodder supply programs for the livestock industry. (3) A substantial new program of drainage and water control measures in addition to start of construction this year on the Shellmouth Dam-Portage diversion complex and continued work on the Red River Floodway. (4) A new approach to the problem of rail-line abandonment to protect the legitimate interests of Manitoba communities.

The Canadian Wheat Board has made a final payment of almost 200 million dollars to farmers for wheat delivered to the Board during the crop year 1962-63. Producers delivered 469,927,000 bushels of wheat to the Board, including 44,371,000 bushels of durum. The average final payment for durum is 64.78 cents per bushel; for grades of wheat other than durum, 40.18 cents per bushel. Minister of Trade and Commerce Hon. Mitchell Sharp notes that this is the farmer's own

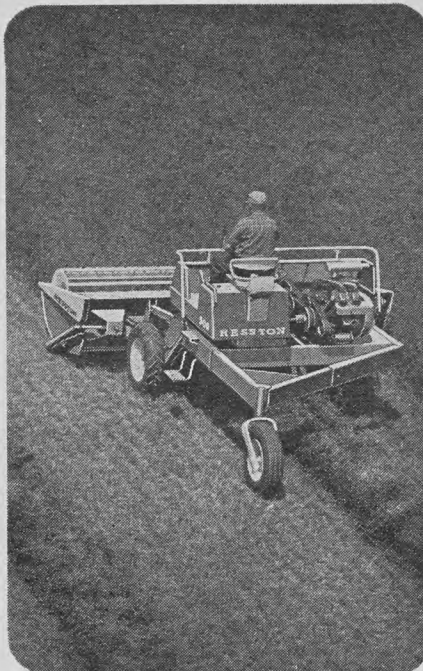
(Please turn to page 93)

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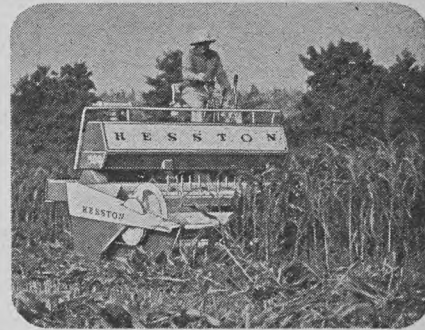
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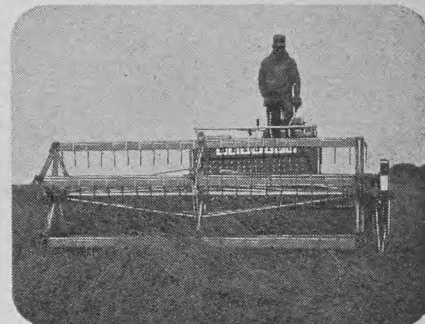
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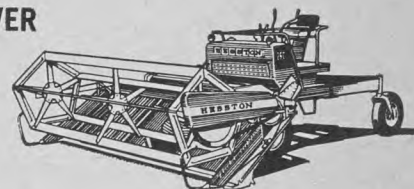
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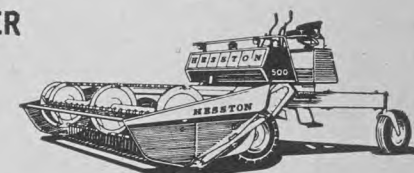
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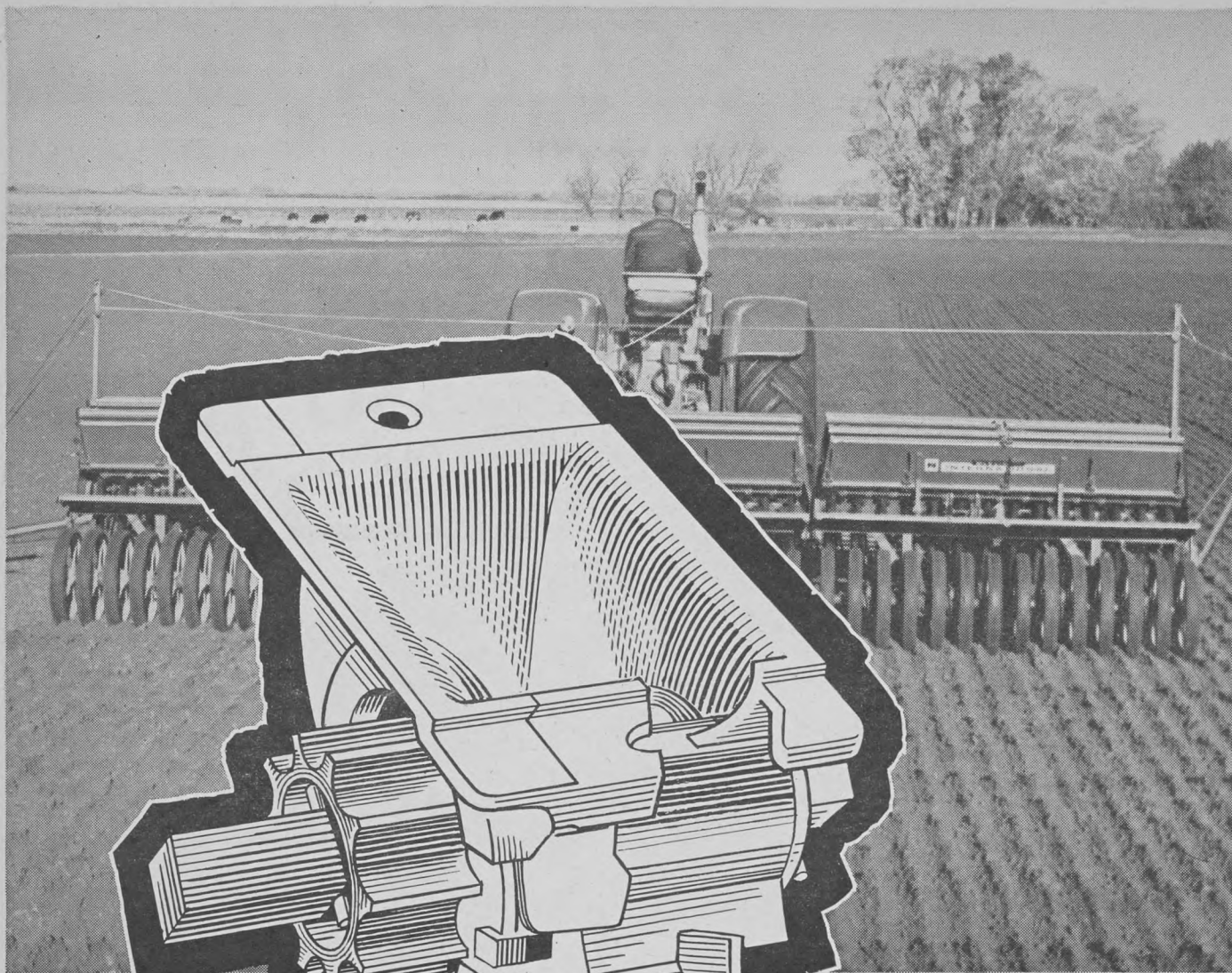
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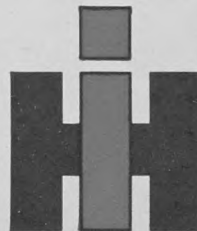
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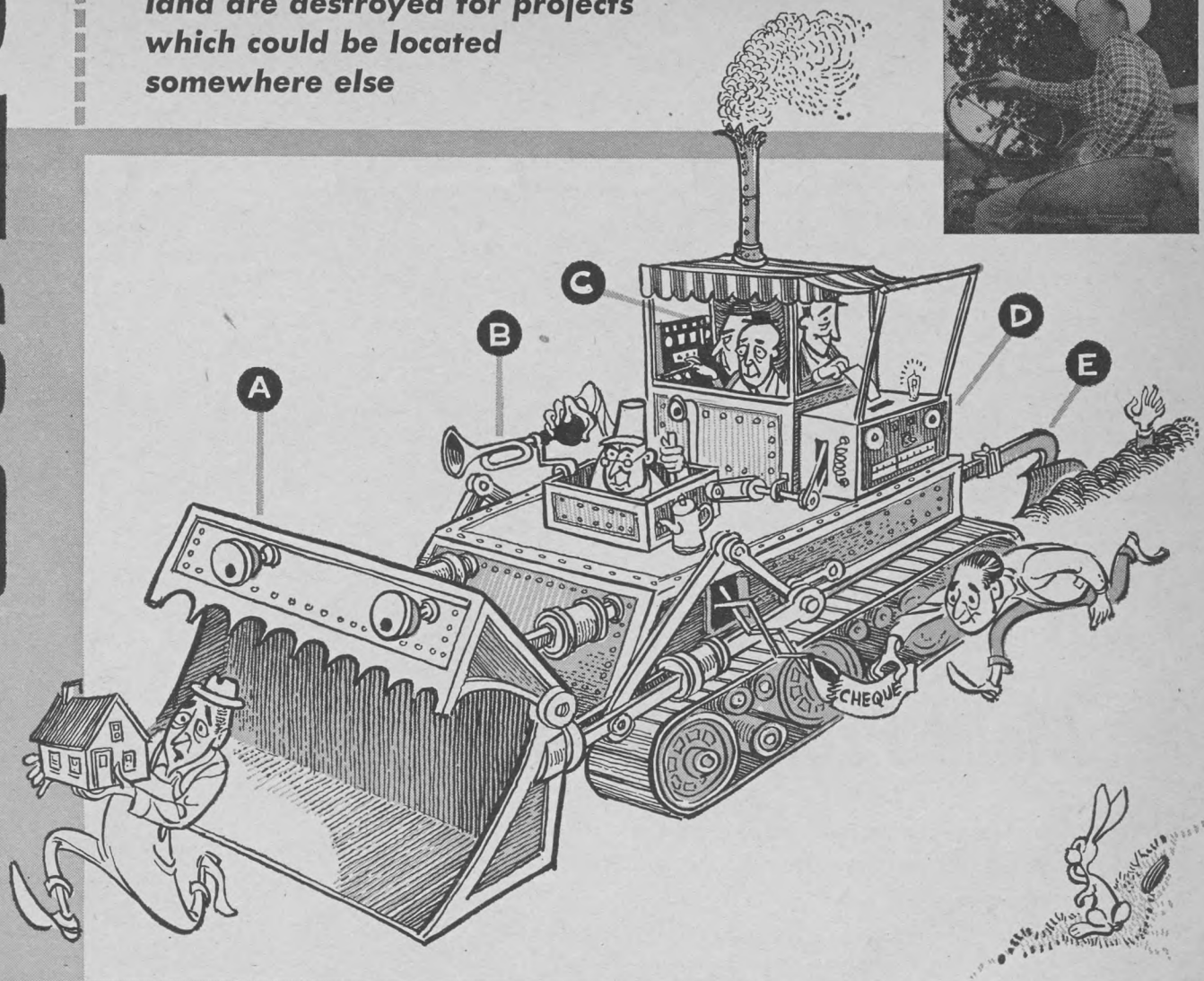
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THIS FARM WAS SAVED

by
CLIFF
FAULKNER

But every year many acres of productive land are destroyed for projects which could be located somewhere else



LEGEND:

- A. Blade to tear up private property.
- B. Horn to let farmers know they're being expropriated.
- C. Officials feeding facts to the brain.
- D. Electronic brain to compute, print and dispense cheques to displaced property owners.
- E. Victims who didn't get out soon enough.

"FOR years people have lived in the fond illusion that when they buy and develop a piece of property this gives them certain rights," Ed Nelson, past president of the Farmers' Union of Alberta once remarked, "but such is not the case. They soon find out what few rights they really have when that property is wanted for some other purpose."

Every day we see the truth of these words borne out. Once the decision has been made to build something on, or through your property you'd better grab your family and hightail out of there before the bulldozers come crashing through your house. And sometimes it apparently doesn't matter how ill-conceived, short-sighted or wasteful the new project is. Some people in this country are not prepared to place any value on highly productive farm land other than that it represents so many square rods of space.

That's what Gordon Douglas of Penhold, Alta., found when he was suddenly informed that a nearby airbase would be expanded for jet training and that his farm would be needed to provide new runways. The people who dreamed this one up must have done very little thinking on the matter beyond their own immediate interests. In fact, the plan had so many flaws it fell apart, in spite of the vigorous efforts of certain groups to push it through regardless.

For one thing, in a country where occupied farm land comprises only 8 per cent of the total area there's not much point in displacing a farmer to put in a defense base. We produce a surplus of food now, but this could change in the future. We can't afford to destroy arable land—not to bring in a few extra dollars to the local community, not even to create a few extra jobs. Arable land is a precious commodity.

The Penhold base had other factors against it. Trainees in fast jets would be operating perilously close to a heavily-traveled commercial air route. The base is also the location of the communications nerve center for Civil Defense. Making it more important militarily would enable an enemy to get "two birds with one stone." There are also strong indications the jet fighter will play an increasingly smaller role in R.C.A.F. operations from now on.

Speaking of the Douglas farm, a land assessor predicted, "Even if this deal goes through, it's my private opinion there will be weeds growing on the new runways within 5 years." And yet a very determined effort was made to make it stick.

The perennial excuse of all land expropriators is "the greatest good to the greatest number." Few people would argue with this, providing each case has been surveyed by some overall authority who has examined the project from every angle.

"In my case," Gordon Douglas said, "local business groups sent in 27 letters from businessmen who wanted to see the air base expanded. I could get 100 letters from farmers who would sooner see the jets located elsewhere."

Gordon came out of the deal with a high regard for the Federal Defense Minister for refusing to yield to pressure, but a loss of \$7,000 to \$8,000 through disruption of his enterprise. He was told to sell his feeder cattle and close his feedlot during the 2 months negotiations were in progress. Work had to be halted on all farm building projects.

But the Douglasses are thankful they have been able to hang onto their home and property. The deeds to the parcels of land which make up the farm provide a history of Gordon's family. The house, main barn, seed cleaning plant and feed

mill lie on the quarter homesteaded by his father in 1890. Adjoining this on the southeast is the original homestead of Gordon's paternal grandfather. Across the road, his cattle feedlot stands on the homestead of his mother's father. These things don't carry much weight in an assessor's calculations, but they have a value that can't be measured in dollars.

The Douglasses were offered a choice of parting with 500 acres down the middle, or selling the whole farm. In the first case, the farm would have been divided into three parcels with no connecting roads to service them. Their place would cease to be a farm for all practical purposes. If they sold outright they would receive \$150 an acre, which would include their home, buildings and installations. Private buyers looking for good farms on rich black soil such as this are offering \$200 an acre. As time goes on this land will increase in value.

"When we were told we'd have to move we drove 1,500 miles looking for a suitable place to re-locate," Gordon said. "We found that although we were being forced to let our farm go at the buyer's price, we would have to buy at the seller's price. They were asking \$175 an acre for poorer land much farther away from a town or main highway than we are."

How far can government or industry go in displacing a private individual and disrupting his livelihood? They can go pretty far for a country which prides itself on a concern for human dignity and the rights of the individual. Groups and persons who shout to high heaven if government takes over a business will be just as loud in their demands that you get shoved out of the way if there is a dollar to be made by it.

(Please turn to page 96)



[Canada Dept. of Agric. photos]

Variety tests throughout the flax growing area have revealed which varieties do well under various conditions.

FLAX —

More Profitable Than Wheat!

Prairie farmers who want to earn extra income, should take another look at flax

FLAX is a versatile crop and a good alternative to wheat. It's also more profitable. What other crop can be sown from mid-April to the first of July with fair certainty of good returns? Like wheat, it is grown successfully in wet years or dry, from the Peace River area to the Red River Valley and beyond. Contrary to common belief, flax is not hard on land. The crop takes less nitrogen, phosphorus, potassium and sulphur from the soil than wheat, oats or barley. It fits well into a cropping program on most farms, is fairly free from disease, and once harvested, it can usually be sold easily, to bring in quick cash, and relieve the storage problem around the farm. Even if it has to be stored, it takes less space than cereal crops.

It's a convenient crop to harvest as well. It will stand up long after ripening without deteriorating. Usually it threshes more easily after a frost.

And of course when it's grown as a means to diversify crop production, it can provide security in case rust or some other hazard destroys the wheat crop.

How profitable a crop is it to grow?

Under the very dry conditions of 1961, flax returns were double those of wheat on some farms. The crop is not only drought resistant, it also responds well to good growing conditions. Grown under test in Regina, flax on summer-fallow yielded 16 bushels per acre whereas wheat yielded 28. In 1963 under ideal growing conditions, some farmers reported yields up to 30 bushels or more per acre. The West Coast Flax Development Committee reports even higher yields than this in the United States. One variety yielded 62 bushels per acre under irrigation in Arizona, and another yielded 75 bushels per acre in California. That would be quite a crop at \$3.50 a bushel.

Yields and prices taken from reports of the Dominion Bureau of Statistics indicate it's a profitable crop. Based on these figures, the 5-year average (1958-1962) showed flax to return 64¢ an acre more than wheat on summerfallow and \$2.62 per acre more on stubble. During this time, 41 per cent of the flax crop was grown on stubble compared to 20 per cent for wheat. Even on

by E. A. HURD
Experimental Farm, Regina, Sask.

summerfallow, farmers with good stands get better returns than this average shows.

Will the demand for flax increase in the future? Presently, the oil from the seed is still in demand for high quality paints and varnishes including the new emulsion paints that dry quickly. As a by-product, the linseed oil meal is a high quality protein supplement for use in most livestock feeds.

A new use being developed may increase demand for flax still further. The product is used to protect concrete surfaces such as bridges, roads, sidewalks and airport landing strips. It has particular value during the curing stages for new

New Race of Flax Rust Changes Variety Picture

The discovery of a new flax rust has changed the list of suitable flax varieties since last year. Redwood, Rocket and Norland are resistant to the new race. Use them for your main crop. Raja is also resistant. Because Raja is early maturing, use it for delayed seeding, or in northern areas.

Flax rust, unlike wheat rust, overwinters on the stubble so is present in the spring to infest the new crop. For this reason flax rust can strike rapidly as it did to Dakota flax in 1949. Wherever flax is grown, rust is a hazard and it is unwise to grow Marine, Cree, Army or Redwing.

concrete. It is also useful in reducing the abrasive effects of de-icing agents such as sand and salt, which are applied during winter. These uses could result in a big new market for flax. For instance 15 or 20 acres of flax are required to provide enough oil to treat one mile of highway. Some of the states are using linseed oil in this way as a



In these tests plots of flax, wild oats grew free, at left, but were controlled by sprays at center.

standard practice. Ontario has used it too. This all seems to indicate that the demand for flax should remain brisk. Most flax sells in the top grade and about half of Canada's flax crop is exported.

Flax is a good crop for a good farmer but you can't grow it casually. You've got to plan ahead, select the most suitable variety and even be sure that you have a suitable field for it.

The critical step is to establish a good stand. Once the stand is established, flax will withstand most hazards as well or better than other crops. This has only been true since weeds in flax could be controlled with chemicals.

Early seeding usually pays. Bill McNally, who farms near Regina, has been growing flax successfully for 10 years and it is the first crop he sows each spring. He usually sows it in late April. He is risking spring frost but he says that the higher returns justify the occasional expensive reseeding.

In fact, flax is hardy. Spring frost seldom damages it severely enough to kill the plants. After the plants have passed the two-leaf stage and are hardened by exposure, they will stand temperatures as low as 18 degrees F. for a short time without damage.

Early seeding has the additional benefit of often resulting in escape from disease and insect damage.

If you miss early seeding, it may be impossible to sow the seed shallowly in a firm seed bed. For instance, by mid-May, the top 3 to 5 inches of soil on a standard summerfallow may be loose

(Please turn to page 96)



The 44,000-acre Waldron Ranch lies between the Porcupine Hills and the Rockies. It carries 4,200 head.

[Guide photo]

\$1 Million Grazing Co-op

These cattlemen thought big when they wanted more grazing land—they established a million-dollar co-op!

by **CLIFF FAULKNER**

Field Editor

IF you want to expand your small cattle operation here's one way to do it—borrow a million dollars. That's what Ed Nelson of Stavely and 108 fellow Alberta cattlemen decided to do when they found themselves running out of grazing land. Of course, in a deal like this there are a few details to be worked out beforehand. You have to find somebody who will lend you that amount of money, and you have to find a sizeable piece of grazing land that's up for sale. In the Alberta range country, good grazing lands are as scarce as polar bears in the Mojave desert.

The grazing land became a possibility when their group heard the historic Waldron Ranch was available. In 1883, the Walrond Rancho Ltd. was founded by British baronet Sir John Walrond Walrond. The following year the company was granted an Indenture of Lease by Queen Victoria, covering 100,000 acres in southern Alberta along the western flank of the Porcupine Hills. For years Walrond cowboys struggled with the name, but the best pronunciation they could come up with was "Waldron." Finally, one of the later owners officially changed it to that.

The first meeting of interested stockmen was called in September 1962. Many of those attending were horrified at the idea of borrowing \$1 million. But most of them stayed and went along with it. A seven-member board was set up to get things rolling. Ed Nelson was elected chairman, Ellis Oviatt, Claresholm, was made secretary and Bill Greig, Nanton, became treasurer. Other board members included: Orrin Hart, Claresholm; Axel Sundquist, Stavely; Ray Ohler, Stavely,

and John Hay, Nanton. Members include stockmen located all the way from Trochu in central Alberta to Spring Coulee, which is about 20 miles from the Montana border. In addition to the Board, there is a livestock committee to advise the group on operations.

The Waldron Grazing Co-op is set up under the Co-operative Marketing Act which is administered by the Alberta Department of Industry and Development. Under the terms of the Act, elections must be held every year. Board members can serve for a period of 3 years. Although there is no public money in the Co-op, the Government agreed to back the loan for one-half its value, or \$500,000. This is in line with the Provincial government's policy of spreading available grass land among the greatest number of small ranchers.

"The banks would never have gone for the proposition if the Government hadn't backed a portion of the loan," Ed Nelson said.

The grazing co-operative is capitalized at \$1 million. One thousand shares were sold at \$1,000 apiece. Each share allows a man to pasture 4 cows or 6 yearlings for 5 months during the summer grazing period. No member can buy less than 5 shares, or more than 25. For instance, a farmer with 5 shares would be able to pasture 20 cows or 30 yearlings. The lower limit was set at the minimum number of animals it would pay an owner to truck into the Waldron; the upper limit was imposed so that no big cattle outfit could gain control of the project. Members can buy each share with a down payment of \$250, or 25 per cent. The rest can be paid through a bank loan over a 12-year period at 6 per cent interest.

Although the co-operative was set up to provide summer grass, some members were allowed to buy in for winter grazing only. Most of these

are nearby ranchers, like the King brothers, who live on the Waldron's eastern boundary. The group is quite happy to sell a few winter shares because it eases the load on the summer grazing. "Because weather conditions might force winter grazers to bring their animals in at any time, we allow them to run twice as many animals per share," Ed Nelson explained.

When the grazing co-op was first started, members thought they could get a lot of work done by volunteer parties, such as fencing "bees." But this didn't work out too well. Whenever they tried to organize a party only two or three members would show up. The problem was solved by appointing a permanent foreman, Kerm (Kermit) Stav, to live right at Waldron Ranch headquarters and let him hire any seasonal help he needs.

The Waldron property consists of 28,000 acres of deeded land and 16,000 acres of lease. It was sold to the grazing co-op for \$35 per acre for deeded land and \$1 per acre for lease. Operational costs of the whole project run about \$30,000 a year. Half of this amount is taxes and lease rental. The rest goes for wages, construction and repairs. Since the group took over, they have built 10 dugouts, 8 stock watering dams and several miles of fence. Expense money comes from a membership fee of \$1.50 per cow per month.

For years the Waldron range has been in poor shape because of scanty rainfall. But since the grazing co-operative took over, each year has seen as much rainfall as formerly fell in three. Last year, they sowed 1,000 acres to tame grasses and took off 450 tons of hay, which was sold to members who were short of feed. The range accommodated 4,200 head of cattle and losses were only three-quarters of 1 per cent.

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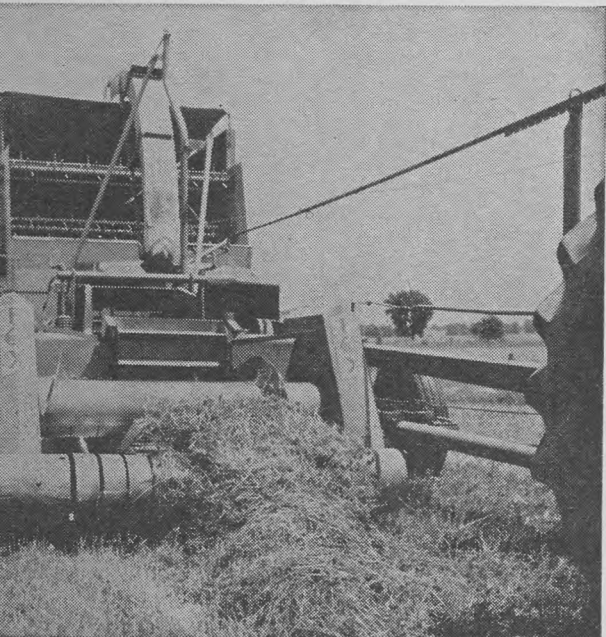
TWO WAYS TO BEAT THE WEATHER AT HAYING TIME

• **Charlie Munroe uses barn drier, makes hay**

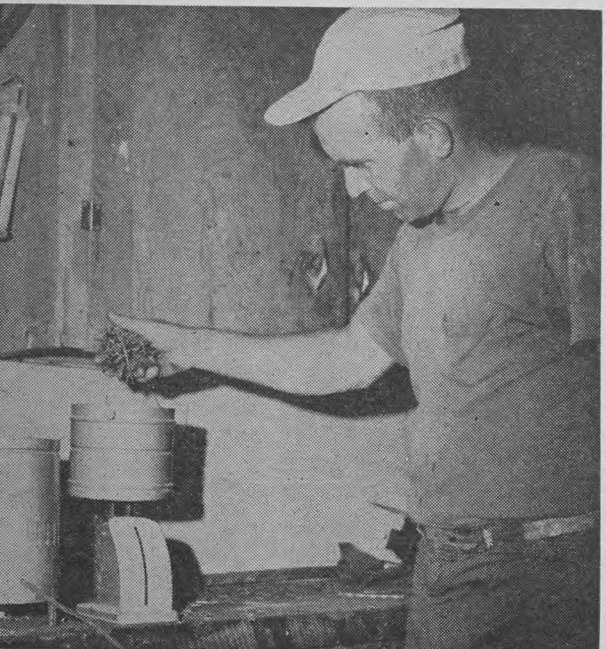
• **Don Hart uses silos, makes haylage**

• **Staff report**

[Guide photos]
Charlie Munroe's drier consists of a fan blowing air through ducts into hay mow. Box-like ducts, closed at the top, are gradually raised as hay is blown into mow, leaving a channel for the air.



Don Hart uses a swather-conditioner to cut the forage. He picks it up with the forage harvester when the moisture content is just right.



Moisture content is critical when you are making haylage. Hart has a moisture tester which he used 3 or 4 times a day when he makes haylage.

BARN DRIER

CHARLIE MUNROE is one dairyman who hasn't turned his back on hay. Not by a long shot. On his Oxford County, Ont., farm he had a barn full of early cut hay last fall and he fed it throughout the winter.

His hay is a treat to look at. It's green, soft and fragrant! He doesn't try to sort out top quality hay for the calves. They relish any of it. So do the cows. They respond with good production too. On his 60 cows last year, his Breed Class Average was 117—which means his production was 17 per cent higher than the average of the cows on R.O.P.

Last year was no exception, either. Each year Charlie Munroe's hay mow contains another demonstration that it is possible to beat the weather and make good hay. His method of beating it is to use a hay drier.

It was 12 years ago that he installed his hay drier. It consists of a 35" fan, set into the end of the barn, blowing air into a 4' duct which leads into the mow, and branches into smaller ducts, and finally, into vertical wooden boxes set in the hay mow and gradually raised as the mow is filled, leaving channels through the hay. The air circulates through these channels and works out through the hay, removing moisture as it goes.

Two years ago, Munroe added one other feature—a hay conditioner.

Now, he begins haying about the end of May or early June, depending on the growth his forages have made, and he tries to finish haying in June. The fan runs for about 6 weeks.

He clips and conditions hay one day, and even in the early season, tries to get it picked up, blown into his forage wagons (he has two of them) and from there, into the mow, the next day. This means the hay is usually in the mow within 36 hours of being cut, sometimes within 24 hours.

He can haul it in while the leaves are still damp, before shattering starts. By watching the weather carefully, he has been able to get most of his hay into the mow without being rained on, the past few years.

Speed is his secret. His hay conditioner, and his mow drier make it possible.

Charlie bales some second-cut hay when he can rent a baler, but his own line of equipment

for haying consists of the hay drier, mower, conditioner, chopper, two forage wagons, and the blower to put the hay into the mow.

In the winter, he feeds the cows hay and corn silage, plus a 15 per cent protein ration (made up with his own grain, plus a bought 32 per cent protein supplement) fed at the rate of 1 pound per 4 or 5 pounds of milk. In the summer, the grain ration is cut back slightly. Cows are strip grazed, given fresh ground daily, using pasture, hayland and sometimes green oats, if it is available.

Munroe points to one other advantage of his system of chopping and blowing hay. There is no heavy work involved. It's a mechanized job. He says this is important today.

HAYLAGE

SOME leading farmers who have tried both hay and silage as winter feed, and weren't satisfied with either, are now turning to haylage with better success. Haylage, in effect, is silage with a low moisture content. Extension people of the Ontario Department of Agriculture see a place for it on some farms. It represents another step in the drive to improve methods of handling and storing feed for winter.

One Ontario dairyman recalls that he tried for 30 years to make good first cut hay. Finally, he decided it couldn't be done consistently. He quit trying, and has now turned to haylage. He makes haylage from his first cut forage crop and makes dry hay with the second cut. Not only does he figure the haylage is a better quality product than hay; he says it takes a lot less work as well. He recalls that he has spent a large part of his life haying. His new program has provided a way to streamline the operation.

Dairyman Don Hart of Woodstock, Ont., is another convert to the benefits of haylage. He has silos on his farm to handle the product, and the machinery that's required to do the work. He explains, "In making haylage you are making a high protein feed. You might almost say it's like making soybean meal."

But Don emphasizes that if you're making haylage you must make it properly. There is only one quality of haylage; it must be fancy or it will be no good. He knows of one dairyman

who filled his silo with what he thought was good haylage and then had to haul the whole works out in the manure spreader.

Plant maturity is the most important factor, says Hart. Alfalfa must be cut in the pre-bud stage. Grasses must be cut before there is a hole in the stem — while the plants are young and immature. Don carries scissors with him when he's making haylage, clips the stems of grasses to see if they are solid.

He also says that moisture testing is essential. He has his own simple moisture tester set up in his machine shed, and runs a test on the wilted forage three or four times a day as it comes to the silo. "You've got to make haylage when the moisture level is correct. It must be between 30 and 60 per cent. You can't tell by the grab test," he says.

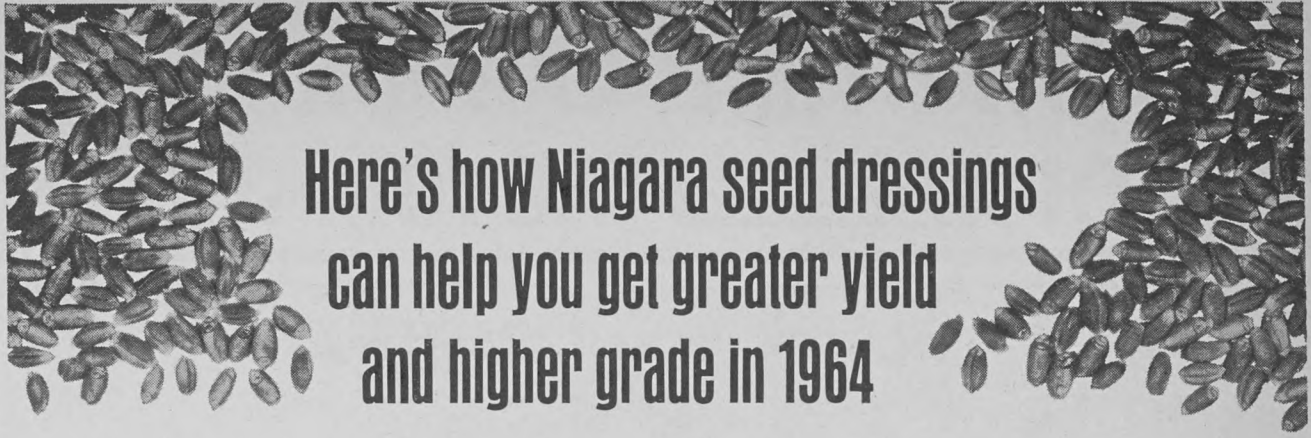
The next point, he says, is to see that the forage goes into the silo in the proper shape. It must be cut short. Once in the silo it must be kept level. If you use a distributor, keep a manager on it to keep it level he advises. It's important not to let the forage roll up in the silo. Don't put in more than 15 to 20 tons without getting in and leveling it.

What about the silo itself? Hart says a 16-foot diameter silo is the minimum size and that a bigger one is satisfactory as well. At one time it was thought that a gas-tight silo was essential but this is now being questioned. Hart and many other farmers make haylage successfully in concrete or stave silos.

Once you start making haylage you have to keep at it. If you stop silo filling for the week end, you must plug the silo with a layer of forage that runs from 65 to 70 per cent moisture. When topping up the silo at the last, put 15 or 20 tons of this high moisture material on top with a plastic sheet over it. It's even advisable to use these high moisture plugs and plastic sheets when you stop for the night.

In Don Hart's book, speed is the factor that really counts. You've got to start early and get the job finished. In 1962 he started cutting haylage on May 26; in 1963 it was May 28 when he began cutting.

This means being prepared. Hart has three power wagons for hauling the haylage. He has a tractor fitted with an extra big engine to provide power for the forage harvester. He has a new swather which he uses. Everything is in first class shape when the haylage season starts. You can't afford breakdowns, he says. You must have power to get over the land. Last spring Don Hart had 100 acres of forage into his silos by June 12.



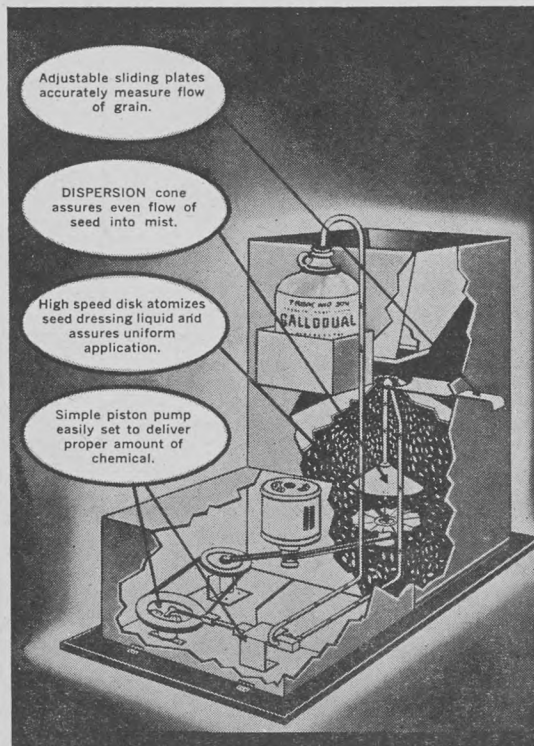
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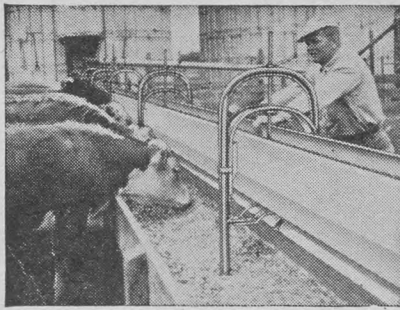
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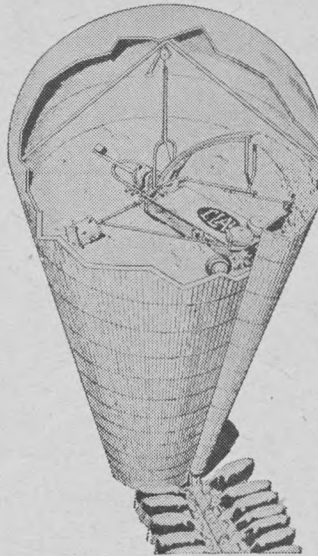
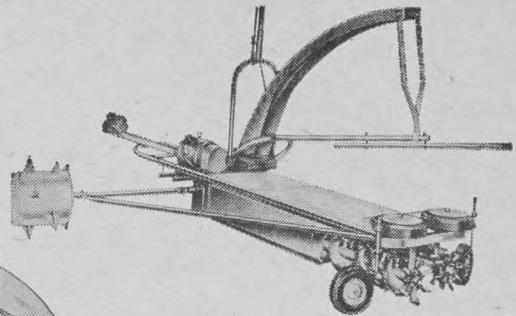


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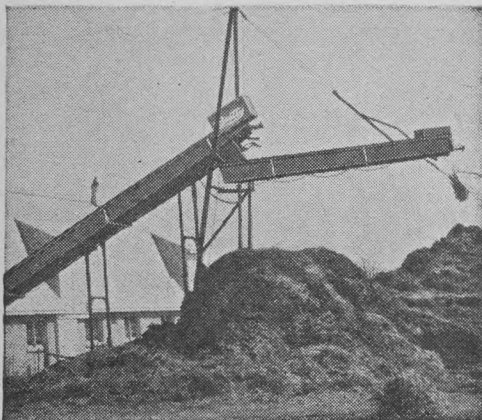


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Don Hart of Woodstock, Ont., uses a swather-conditioner to cut grass-legume stand. It wilts, then is ensiled.

[Guide photos

Take Another Look at Legumes . . .

They can produce as much feed per acre as a good corn crop, but their protein is higher

ALTHOUGH corn acreage has increased rapidly in recent years, don't think it is going to replace grasses and legumes. In the view of Prof. George Jones of the Crops Science Dept., Ontario Agricultural College, these forage plants have an increasingly vital role to play in modern farming. They may be the key to another breakthrough in cutting production costs.

Farmers and research people are finding that when corn and legume crops are grown under sound management, yields, measured in tonnage of feed produced, can be just about equal. That's right. Alfalfa can produce as much feed per acre as a good crop of corn.

That's not all, says Jones.

Don't forget that corn never was, and probably never will be, a balanced ration for any type of livestock. It is essentially an excellent high energy feed. But it is short on protein, which is the expensive part of the ration.

Alfalfa, on the other hand, represents a more balanced livestock feed than corn. It is higher in protein, calcium, phosphorus, and certain vitamins than is corn.

Corn has the energy. Alfalfa can't match it that way. But alfalfa has the protein. A 4-ton crop of alfalfa at 17 per cent protein, represents nearly 1,400 lb. of crude protein, or the equivalent of the protein in 1½ tons of soybean oil meal.

Alfalfa then can produce enough feed per acre to make it an attractive crop, compared with corn. But the amount of feed that corn yields per acre isn't the only reason acreage is expanding. Another reason is that growing and handling the crop is now a simple job. Minimum soil preparation can be used. There is a rather complete understanding of fertility management. Complete weed control through chemicals is possible. Corn production, in fact, is almost a completely mechanized job.

However, times are changing for alfalfa production too. This crop can be sown in many areas without a companion crop; kept free of weeds chemically; and cut twice the seeding year, and subsequently three times a year to provide top quality feed.

Corn is a stored feed. It can be ensiled as whole plant silage, high moisture corn, dried grain, or what have you. The techniques are well known now.

But in the same sense that corn is silo-stored, there seems little doubt that alfalfa can be stored too. The system of storage that is most likely to become popular is as high dry matter silage (haylage).

It seems then, Jones goes on, that assembly-line techniques for forage production are already available, or at least being prepared. The only drawbacks to a more extensive use of forages in feed-

lot or yard feeding are quickly being eliminated. In the same context that corn has become a major stored feed, there seems no reason why forages cannot be used in the same way. There would be side benefits for farmers who try the system, too.

He Grows a Complete Feedlot Ration

DON HART is one farmer who has found a method of growing both the protein and the energy for his feedlot ration.

Hart is a Woodstock, Ont., dairy farmer, who recently built a feedlot and devised a program in which home-grown feed would reduce his feeding cost. His beef unit consists of an open-ended barn, with a manger extending along its length. At the closed end of the barn stand two silos. By fall one of the silos is filled with haylage, the other with corn silage. By pushing buttons, Hart can move the required proportions of feed from each of these silos into the feed bunks, providing the steers with virtually a complete ration.

Both silos are 50 feet high. (He plans to add another silo to double his capacity from 100 to 200 steers.) The smaller silo, which is 16 feet in diameter, handles the haylage while the other, which is 20 feet in diameter, is for the corn silage.

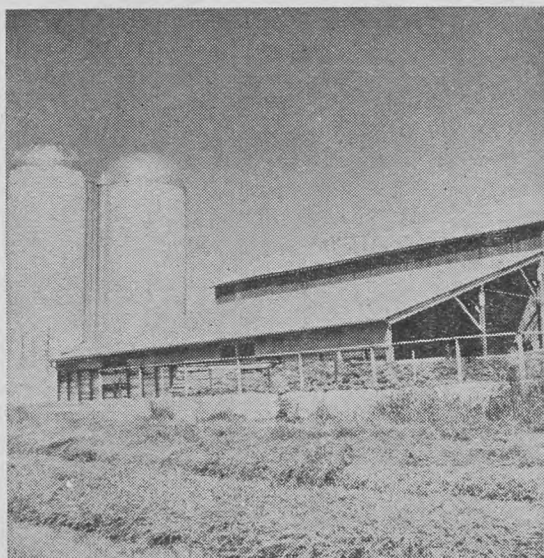
Making haylage is a precision operation on the Hart farm. The forage must be put into the silo at the exact stage of maturity and moisture content must be low. The results justify the care. Last year the protein content of his haylage was 12.1 per cent. Water content was only 41 per cent.

Hart bought 100 385-lb. western calves in the fall and started them on a ration of 7 lb. haylage, 20 lb. corn silage, with mineral and salt added. They were given no extra protein at that time.

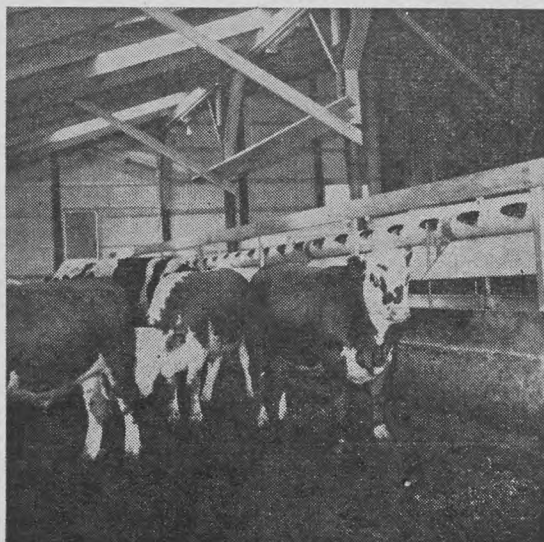
In January he began to supplement the ration slightly, adding about 1½ lb. of a mixture of corn and cob meal and some soybean oil meal. He gradually increased this to 3 lb. per day. When he ran out of corn silage in early summer he increased the supplement part of the ration to 12 lb.

The steers did well on the program and went to market in July and August weighing about 1,000 lb. each.

What about costs? This young farmer places a value of \$3.60 per ton on his corn silage and \$4.50 per ton on the haylage. Using these figures, feed costs worked out to less than a dime for each pound of gain made by the steers, while total cost of making a pound of beef was only about a dime.—D.R.B.



Haylage in one silo, corn silage in the other make up his complete feedlot fattening ration.



Calves were fattened on home-grown ration of haylage, corn silage and a little supplement.

BUNNIES

in the Bag

by C. P. BARAGER

ALMOST every farm boy at one time or another has hunted rabbits. And usually this interest is still alive when he reaches manhood. Many crack riflemen can recall receiving their first training on fast-stepping Jacks or cottontails. After many years afield I still find there is nothing like rabbit shooting to keep me in gunning practice.

The big bounding Jack, in Western Canada, and the snowshoe hare and cottontail which are found across the country can provide excellent sport.

A friend who recently came west tells me he spent many week ends hunting snowshoe rabbits within 150 miles of Toronto. He pointed out that snowshoes are on the preferred list when hunted with a dog. The cottontail will hole-up when hard pressed, whereas the snowshoe will run his heart out and will often leave the dog floundering in the snow. Hunting with a dog has never caught on in the West, but to the veteran accustomed to the thrill of the bugling music of a hound, there will never be anything to quite match it.

Anyone who has seen a Jack under full steam knows how fast he can travel. He can cover from 15 to 20 feet at a leap and will jump wide of his trail to throw off a pursuer. A Jack is also skilled at doubling back and may return to his starting point after making a half-mile or more circle.

During mating the males sometimes fight to win the favor of a female. But these battles appear to be mere sham for the contestants deliver harmless blows and frequently pause between rounds to nibble vegetation.

The doe begins producing young before she is a year old. The gestation period is about 30 days. Two litters a year is average in the Jack family with three or four to a household. A big Jack will weigh 10 pounds.

Whether you class them all as "rabbits" or list them as rabbits and hares, they are all vegetarians and the majority of farmers, ranchers and fruit growers can attest to the damage they do. Most land owners will be happy to see you decimate their numbers. Meanwhile you can add some enjoyable eating fare to your own table.

To hunt the Jack, first check the highways. Take your clue from areas where animals have been killed by passing motorists and turn up the next side road that looks passable. If there is snow, drive slowly and check for tracks. Rabbits have regular crossings intersecting the roads and



While glasses aren't absolutely necessary they come in handy and can save steps. Author's are 9 x 35. [Barager photos]

where these lead into clumps of trees it is a good bet there'll be a Jack nearby.

While glasses are not necessary they are handy for checking any white spot that catches your eye. In settled areas the white spot could be a vagrant piece of paper and a pair of 7 x 35 or 8 x 40 binoculars will save many steps. My own pair is 9 x 35 which I like for the open prairie.

In any type of rabbit hunting, a great many tracks do not mean a corresponding number of bunnies. Rabbits congregate at night to feed and frolic, leaving such a maze of tracks and trails as to leave the impression the woods are full of the animals.

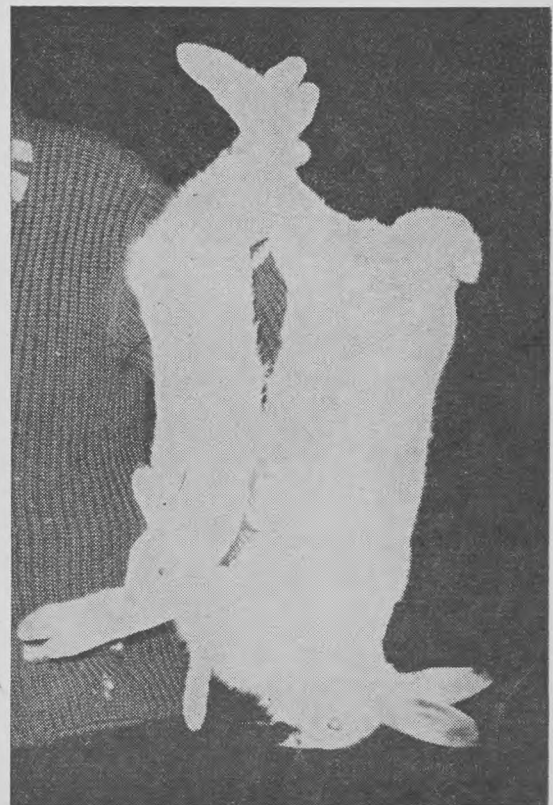
A sunny day makes it easier to spot Jack. Especially is this true in the early morning and late evening when slanting rays of sunlight catch our quarry at a disadvantage. A dull day works against the hunter.

Check the plowed fields in farming country and areas around stacks and abandoned buildings. When snow is deep, look for Jack along fence rows and around trees, in fact, anywhere the snow has drifted in high banks. The animals are well camouflaged against their white background so watch sharply for the black ear tips or the black shoe-button eye that usually catches your attention first.

Terrain and hunting technique determines what type of firearm to carry. This does not mean the rabbit hunter must have an arsenal of guns. Anything from the .22 rimfire to the high-powered center-fire may be found satisfactory. But some guns do have an advantage over others under certain hunting conditions.

If you hunt with the .22 rimfire or the shotgun you must get closer to your game. By comparison these weapons must be considered short range. I have killed a good many Jacks with the rimfire

but have never found it quite satisfactory. If the animals jump wild the slow-speed bullet makes lead estimation difficult. If Jack stops within a 100 yards for a quick look back, the .22 is adequate, but this opportunity does not come often. If you carry a .22 use only long rifle high-



Note the difference in size between the snowshoe hare on the left and the Jack rabbit, right.

speed cartridges as even these are none too effective for making humane kills.

The scattergun enthusiast should use shot sizes in 4, 5 and 6. I have never used anything but fives and sixes on Jacks. If you spot your quarry before he jumps your chances of taking him have doubled. But never walk directly toward him. Keep a hundred yards to one side and edge in slowly as you walk back and forth. Make Jack believe you haven't seen him by going right by and he'll usually sit tight until you are ready to flush him. Forty yards is close enough if you are fast on the draw. Stalking and rolling Jack on the run with a shotgun is a real challenge and considered by many hunters as the only sporting way to take him.

It seems too, however, that when Nature made Jack she had the long-range rifle addict in mind as well. In fact, when the animals are flushing wildly the varmint or deer gun is the only answer to bagging a bunny. The ultimate in rifle perfection comes in rolling a running Jack out to the 200-yard range.

For the man who hunts the snowshoe or cotton-tail there is nothing better than the smoothbore. These animals often hide out in the densest thickets and I have found that a shotgun loaded with size 7½ shot is the answer to getting through the tangles. The scattergun is the choice, too, when hunting with hounds where the hunter awaits for a streaking bunny to break through a clearing. For open woods stalking the .22 comes into its own and a bunny shot through the head with the rimfire spoils no meat.

If you want a specialized rabbit gun for the densest tangles, take a single barrel shotgun and

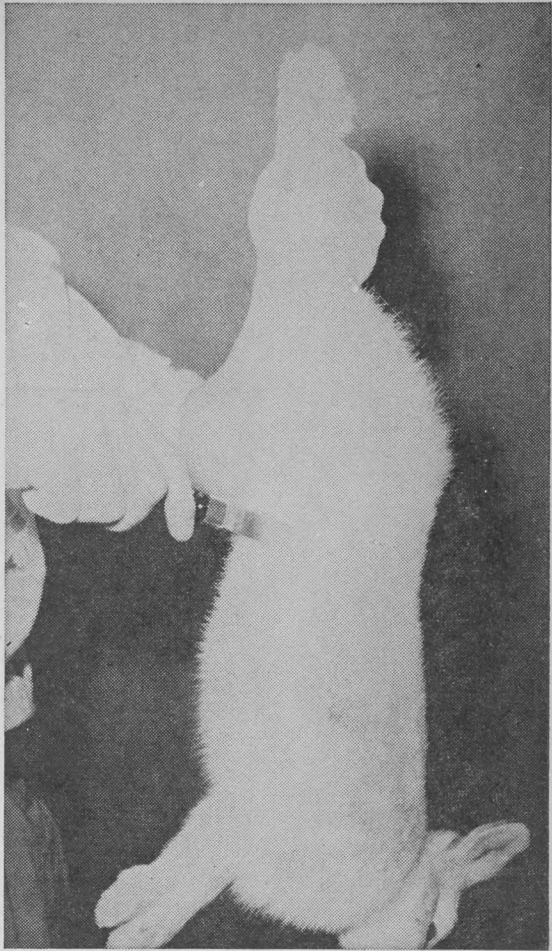
remove about six inches from the end of the barrel. With it goes all the choke and when loaded with number 10 shot you have the answer for getting through heavy cover. The short barrel makes for faster handling in dense undergrowth but remember its effective range is no more than 15 yards.

The responsibility of the hunter does not end with the shooting. To be good eating on the table rabbit meat must have proper field care. This means removing the entrails from the animal and letting the blood drain. The method for doing this is simple and takes but a few minutes.

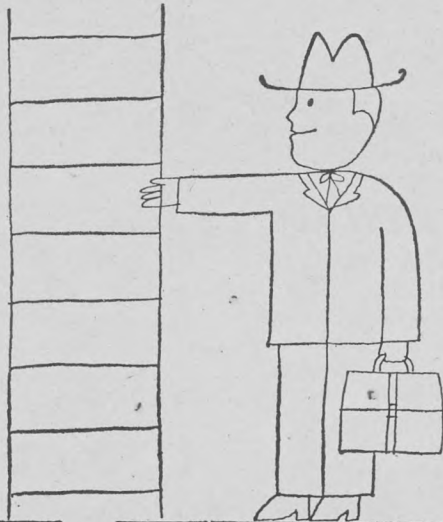
Hold the animal by the hind legs and, with a knife, slit the belly from hind legs to front, cutting through the rib cage. Still grasping the back legs, grasp the neck and head with the other hand; bring the arms in close to the body, then snap them down and outward. This will dislodge the viscera. Remove the head and wipe out the body cavity with a bit of dry grass or paper towels carried on your person for the purpose. The hide may be left on as a protective wrapper against dirt until you arrive home.

To quick-skin a rabbit, make a slot in the hide in the middle of the back. Place the fingers of both hands in this slot and pull in opposite directions. Cut off the legs at mid-joints and go over the animal to remove blood clots and bits of entrails left from the field dressing.

In parting I'd like to add, there is no sport anywhere that requires the minimum of equipment for the maximum of enjoyment as does rabbit hunting. Old and young, rich and poor alike can share in it and provide food for the table that is second to none.



To eviscerate a rabbit, grasp it by the hind feet and make an incision from back legs to the neck.



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1963 Results of Cominco Demonstration Farms Announced

ALBERTA PINCHER CREEK

M. J. Hochstein

A four-year-old stand of brome-alfalfa (50-50) receiving a fall broadcast application of 250 lbs. per acre of Elephant Brand 16-20-0 yielded an extra .9 tons per acre for an increased net profit of \$9.60 per acre. It is significant here that an identical test in the spring

NOTE: "Increased net profit" made in these demonstrations is the profit made after the cost of the fertilizer has been deducted.

resulted in a net loss of \$0.40 per acre due to an exceedingly dry spring.

A fall application of 250 lbs. per acre of Elephant Brand 27-14-0 to a four-year-old stand of timothy gave an increased yield of 1.4 tons per acre. This meant an increased net profit of \$18.00 per acre.

BEISEKER

J. H. Schmaltz & Sons

Despite 50% hail damage, wheat on summerfallow fertilized with 50 lbs. per acre of Elephant Brand 11-48-0 yielded 4.5 bushels per acre more than the unfertilized check. This realized \$4.75 per acre increased net profit.

LACOMBE

Allan Chiswell

A fall application of 100 lbs. per acre of Elephant Brand 27-14-0 to a brome-alfalfa-timothy mixture resulted in an increase of .4 tons per acre in two cuts. This extra yield gave an increased net profit of \$3.75 per acre.

Barley on summerfallow fertilized with 50 lbs. of Elephant Brand 11-48-0 per acre yielded 18 bushels per acre over the unfertilized check. This realized \$12.00 per acre in increased net profit.

Elephant Brand 23-23-0 applied to barley on stubble at 100 lbs. per acre raised the yield by 35 bushels per acre. This meant an increased net profit of \$23.50 per acre.

Oats on stubble receiving 100 lbs. of Nitraprills broadcast plus 50 lbs. per acre of Elephant Brand 11-48-0 with the seed gave an increased net profit of \$13.85 per acre. The yield of 72.2 bushels per acre was exactly twice that of the unfertilized check.

EDMONTON

Andrews Brothers

Nitraprills fall applied to Eagle oats on stubble at the rate of 125 lbs. per acre, plus 50 lbs. of Elephant Brand 11-48-0 sown with the seed, raised the yield by 19.4 bushels per acre for an increased net profit of \$3.54 per acre.

A fall application of 110 lbs. per acre of urea to Eagle oats on stubble, followed by 50 lbs. per acre of Elephant Brand 11-48-0 with the seed, gave a yield 26.1 bushels higher than the unfertilized check. This realized \$6.57 increased net profit per acre.

Brome-alfalfa hay with a fall application of Elephant Brand 16-20-0 at 300 lbs. per acre gave an increased yield of 1.12 tons per acre in two cuts. Increased net profit totalled \$11.90 per acre. When a comparable rate of 16-20-0 was spring applied, it showed an increased net profit of \$5.50 per acre.

A fall application of urea at the rate of 150 lbs. per acre to brome grass grown for forage increased the yield by .75 tons per acre from one cut. Increased net profit amounted to \$7.80 per acre. When urea was spring applied at 150 lbs. per acre on this field it resulted in a \$4.80 net loss per acre.

Nitraprills fall applied to brome at 200 lbs. per acre gave a yield increase of

.48 tons per acre for an increased net profit of \$2.20 per acre. When the same rate was spring applied it resulted in an increased net profit of \$0.20 per acre.

ST. ALBERT

Angus McDonell

A second-year stand of alfalfa with a fall application of Elephant Brand 11-48-0 at the rate of 150 lbs. per acre gave 2 tons per acre in two cuts, an increase of .4 tons over the check. This meant an increased net profit of \$2.50 per acre.

Grass hay fall fertilized with 150 lbs. per acre of Elephant Brand 27-14-0 gave a .6 ton higher yield than the unfertilized check. This resulted in an increase of \$5.85 per acre in net profit.

Oats on summerfallow treated with 50 lbs. per acre of Elephant Brand 11-48-0 gave an increased net profit of \$2.50 per acre through an increased yield of 8.2 bushels per acre.

Oats on fourth year stubble receiving a fall application of Nitraprills at 120 lbs. per acre and 50 lbs. per acre of Elephant Brand 11-48-0 with the seed yielded 22 bushels per acre more than the unfertilized check. This meant \$5.65 in increased net profit per acre.

FAIRVIEW

George Moskalyk

Barley on summerfallow fertilized with 60 lbs. per acre of Elephant Brand 11-48-0 gave an increased net profit of 78¢ per acre from a yield increase of 6 bushels per acre.

A broadcast application of Nitraprills at 100 lbs. per acre to flax on well worked brome sod, plus 40 lbs. per acre of Elephant Brand 11-48-0 sown with the seed, resulted in a per-acre increase of 3.8 bushels. This meant an increased net profit of \$7.22 per acre.

SASKATCHEWAN

MEOTA

Bob Tait

Barley on stubble received 85 lbs. per acre of Nitraprills plus 40 lbs. per acre of Elephant Brand 11-48-0. The increased yield of 17 bushels per acre realized an increased net profit of \$11.70 per acre.

Barley on summerfallow treated with Elephant Brand 11-48-0 at 40 lbs. per acre yielded 14.9 more bushels per acre than the unfertilized check for an increased net profit of \$12.88 per acre.

MIDDLE LAKE

E. C. Heidecker

A fall application of 200 lbs. per acre of Elephant Brand 27-14-0 on brome-alfalfa hay raised the yield by .7 tons over the unfertilized check. This re-

turned an increased net profit of \$5.50 per acre.

Oats on stubble received a fall broadcast application of Nitraprills at 80 lbs. per acre plus 40 lbs. per acre of Elephant Brand 11-48-0 applied with the seed. The net result was a loss of \$3.20 per acre. A 45-lb. per acre application of 11-48-0 to oats on summerfallow netted a loss of \$2.25 per acre.

MELFORT

W. C. Goodman

Montcalm barley on stubble gave an increased yield of 15.3 bushels per acre after a spring broadcast application of 120 lbs. of urea per acre and 50 lbs. per acre of Elephant Brand 11-48-0 applied with the seed. Increased net profit amounted to \$6.73 per acre.

A spring application of 140 lbs. of Nitraprills per acre to Montcalm barley on stubble, plus 50 lbs. of Elephant Brand 11-48-0 with the seed, resulted in an 11.7 bushel per acre increase over the unfertilized check. This meant an increased net profit of \$3.66 per acre.

A fall application of Montcalm barley on stubble fertilized with 160 lbs. of Nitraprills per acre, plus 50 lbs. of 11-48-0 with the seed gave an increased net profit of 15¢ per acre.

A 50-lb. per acre application of Elephant Brand 16-20-0 to barley on stubble resulted in an increased yield of 6 bushels per acre, for an increased net profit of \$5.19 per acre.

Brome for forage fertilized with 170 lbs. of Nitraprills per acre broadcast in the fall yielded 2.11 tons per acre more than the unfertilized check. Increased net profit per acre amounted to \$35.53.

ALAMEDA

Wm. D. King

Selkirk wheat on summerfallow receiving 40 lbs. per acre of Elephant Brand 11-48-0 netted \$5.70 in increased net profit through an increased yield of 4.4 bushels per acre.

A 60-lb. per acre application of Elephant Brand 27-14-0 to Ramsey durum wheat on stubble resulted in an increased yield of 12.3 bushels per acre. This realized an increased net profit of \$20.02 per acre.

A ten-year-old stand of brome-alfalfa hay fertilized with 130 lbs. per acre of Nitraprills gave an increased net profit of \$13.12 per acre through an increased yield of 1.12 tons per acre.

VANSCOY

Ben Blacklock

Wheat on summerfallow seeded with 35 lbs. per acre of Elephant Brand 11-48-0 yielded an extra 7.6 bushels per acre. This meant an increased net profit of \$9.65 per acre.

Betze barley on stubble was seeded

with 60 lbs. per acre of Elephant Brand 27-14-0. An increased yield of 8 bushels per acre resulted in an increased net profit of \$3.80 per acre.

A spring application of 100 lbs. per acre of Nitraprills to brome grass raised the yield by .74 tons per acre for an increased net profit of \$10.40 per acre.

MANITOBA

GLADSTONE

Harry Morton

A 56-acre field of brome-meadow fescue was divided into two equal paddocks. One paddock was fertilized with 150 lbs. per acre of Elephant Brand 16-48-0. The other was not fertilized. Both paddocks were grazed to capacity with stocker steers. Over a 112-day grazing period, the fertilized paddock produced 5,345 lbs. of beef, while the unfertilized paddock produced only 2,489 lbs. This worked out to an increased net profit of \$15.47 per acre.

DOMINION CITY

Elmer Kirkpatrick

Barley on stubble fertilized with 80 lbs. per acre of Elephant Brand 23-23-0 yielded 20.5 bushels per acre over the unfertilized check. This meant an increased net profit of \$16.90 per acre.

Early rains followed by intense heat and rust damage resulted in a poor return from wheat. Despite this, Selkirk on summerfallow receiving 45 lbs. of Elephant Brand 11-48-0 per acre showed a gain of 2.7 bushels for an increased net profit of \$1.74 per acre.

A 150-lb. per acre application of Elephant Brand 23-23-0 on grass-alfalfa hay showed a yield increase of 2,040 lbs. per acre from two cuts. This resulted in increased net profit of \$7.53 per acre.

MAGNET

Fred Robinson

Wheat on stubble fertilized with Elephant Brand 16-20-0 at a rate of 90 lbs. per acre yielded an extra 8.2 bushels per acre for an increased net profit of \$9.05 per acre.

Elephant Brand 11-48-0 applied at 60 lbs. per acre to wheat on summerfallow gave a yield of 40.1 bushels per acre compared with a 29.6 bushel yield from the unfertilized check. This meant \$13.16 per acre in increased net profit.

Oats on third crop land fertilized with an 80-lb. per acre application of Elephant Brand 16-20-0 yielded an extra 14.3 bushels per acre over the unfertilized check. This meant \$5.54 per acre in increased net profit.

SWAN RIVER

Wm. McMillan

A seven-year stand of Climax timothy for seed fertilized with 290 lbs. per acre of Elephant Brand 27-14-0 gave an increased yield of 289 lbs. per acre. This realized an increased net profit of \$72.50 per acre.

Third crop Selkirk wheat receiving Elephant Brand 23-23-0 at 90 lbs. per acre produced 12.6 bushels per acre more than the unfertilized check. This represents an increased net profit of \$14.20 per acre.

Wheat as second crop after sod breaking received a broadcast application of 290 lbs. per acre of Nitraprills, plus 40 lbs. per acre of Elephant Brand 11-48-0 with the seed. An increased yield of 19.6 bushels per acre resulted in an increased net profit of \$14.20 per acre.

Elephant Brand 27-14-0 applied to wheat on stubble at 85 lbs. per acre produced a yield of 31.7 bushels per acre. The increase of 13.9 bushels over the unfertilized check paid off in an increased net profit of \$16.85 per acre.

5 Years' Results Show These AVERAGE EXTRA NET PROFITS

ON SUMMER-FALLOW

\$8.40
EXTRA NET PROFIT PER ACRE

ON STUBBLE & SOD BREAKING

\$7.78
EXTRA NET PROFIT PER ACRE

ON FORAGE

\$11.50
EXTRA NET PROFIT PER ACRE

With Recommended Rates of ELEPHANT BRAND FERTILIZER

These extra net profits are the five-year average of farm-scale use of Elephant Brand Fertilizer on 187 Demonstration Farm fields — 58 on summerfallow, 80 on stubble and sod breaking and 49 on forage. In every case these figures represent the increased net profit per acre after deducting the cost of the fertilizer.

The results of the 1963 Demonstra-

tion Farms, which have been included in the averages above, are tabulated on this page. These demonstrations were carried out by 15 farmers in Western Canada, working closely with Cominco District Supervisors. Results during the 1963 growing season averaged an increased net profit of \$10.39 per acre after paying for the Elephant Brand fertilizer.

Sheepmen Bunt Back

An article in our December 1963 issue, suggested that the sheep industry is expendable. Now, sheepmen have come to the defence of their industry. Here are two thought-provoking letters on the subject, as well as a further comment from the author of the original article

Wool Blindness

"Wool in Our Eyes," appearing in your December issue is full of inaccuracies and downright prejudices. It states: "The Canadian Sheep Breeders' Association would like to see our per capita consumption of lamb restored to the 11 or 12 lb. of the early '20's from the present level of around two." Truthfully, the present per capita consumption is closer to 4 lb. and there is no evidence obtainable that it was ever more than 6 or 7 in the early '20's. Considering our increased human population, it must be admitted that Canada is eating more lamb today than was the case 40 years ago. This is very much to the benefit of New Zealand and Australia. Incidentally, the actual imports of lamb in 1962 totaled 37,587,000 pounds, not just 10,000,000 as intimated by Mr. Revell.

Also, he says: "It defies the experts to tell the difference as it comes to the table, whether it was imported or from a grain-fed Ontario lamb." Such a statement is laughable, as any home economist or gourmet will testify. One of our successful commercial sheepmen, Dick White, of Meaford, Ont., writes: "It compares with Ontario lamb as bologna to caviar."

Speaking of wool blindness, the author mentioned our wool importations as being worth only \$2¼ million. He might be interested to learn that they are worth closer to \$25 million annually.

Australia's wool clip in 1963 was at least 1,750,000,000 lb. and not 200,000,000.

Generalizing, he says: "Canadian sheep production is not economically sound." Unless he can provide proof to substantiate such a ridiculous statement it might be wise for him to keep out of print. Successful commercial sheep raiser Dick White says: "Sheep in Ontario can be kept profitably on high priced land. In fact, they can compete successfully with dairying. In Kentucky, sheep are being raised profitably on \$500 per acre land."

As for it not being economically sound, literally dozens of carefully kept records prove such a statement to be absolutely incorrect. An Ontario farmer purchased 50 young ewes in 1961 at a cost of \$1,500. The ewes raised 75 lambs in 1962 and the total gross return, wool and lambs, was \$1,747, thereby recovering the original cost with \$247 left over in the first year of operation. From Alberta, one operator reports a revenue of \$3,309.38 from 101 ewes, or almost \$33 per head. Still another reports \$2,781.50 from 96 ewes in 1961, and after losing 6 ewes, the remaining 90 head grossed \$2,836.68 in 1962. In no case were

any of the sheep purebred, just good commercials.

The government assistance accorded our sheep industry in recent years has had the purpose of creating new interest. Opportunities would diminish if such assistance was removed. Significantly, there is no duty on raw wool imports and comparatively little on lamb imports but think of the extent to which Canadian manufacturers are protected against imported woollens.

As for the unwarranted jibe at 4-H Sheep Clubs, we agree with one correspondent who puts it: "This is too stupid for comment."

To conclude, we quote from a report submitted to the Federal Minister of Agriculture by the Sheep Survey Committee early in 1959:

"Natural conditions in all parts of the occupied areas of the country are well suited to sheep production. In fact, with unoccupied acres being added to annually as mechanization increases, such lands can best be made revenue-producing by being used for sheep production. Sheep, of all livestock, have the greatest capacity for converting grass into food without the use of supplementary feeds. In addition, products of the sheep industry, meat and wool, are in deficit supply in Canada and will continue to be so well into the future which cannot be said of many other farm products."

Yes, Mr. Revell, I definitely diagnose your trouble as a very bad case of Wool Blindness and if, as I suspect, you never owned sheep, may I suggest that you purchase 50 or 100 good, young commercial ewes next fall. Under proper care and management perhaps they would cure the blindness.

W. H. J. TISDALE,
Secretary, Canadian Sheep
Breeders' Association.

Wool Shortage

An article entitled "Wool in Our Eyes" published in the December edition of Country Guide contained many inaccuracies.

A partial list follows:

- The article misleads the reader in singling out sheep in cost-of-production comparisons — Australian stockmen can sell cattle cheaper as well.

- The quotation used with reference to Agricultural Stabilization Board storage of lamb carcasses does not apply now, as is indicated. The government has not purchased lamb for the past 2 years.

- Tougher competition from man-made fibers does not mean that producers should now throw up their hands in defeat and refrain from

growing wool for market. Competition is good for any industry and nothing measures up to wool.

- Recent figures show wool fiber consumption in the United Kingdom, from January through September 1963 up 3.3 per cent over the same period in 1962. The Country Guide article reported that a drop in wool and wool product usage in Great Britain had taken place in the first half of 1962.

- In the United States' carpet industry, the consumption of wool was

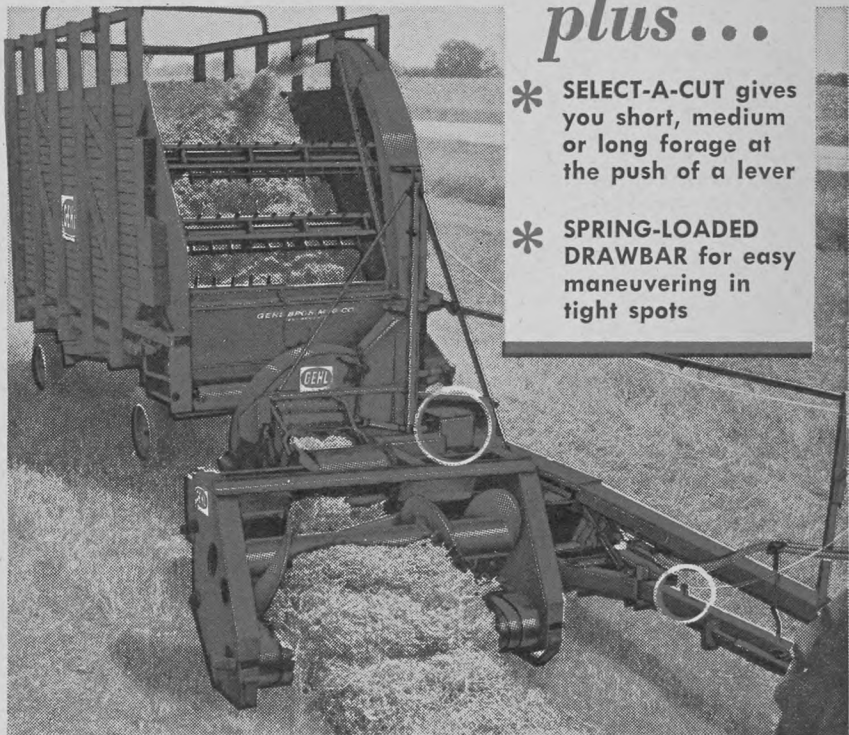
up 15 per cent in 1963 from the previous year. This puts a different light on the statement "in the U.S.A. wool and wool blended carpeting has gone back to fourth place among floor covering supplies."

- A Canadian sweater manufacturer who uses 75 per cent synthetics and who does not use any Canadian wool is quoted as saying "nothing could be of less importance to me than Canada's wool industry." Let us set the record straight—besides the many quality sweater manufacturers who use only wool there are a number of other major manufacturers in this country to whom Canadian wool production is essential. They find

(Please turn to page 96)

NEW GEHL CHOP-ALL

fine chopping with chrome-edged knives
plus...



* **SELECT-A-CUT** gives you short, medium or long forage at the push of a lever

* **SPRING-LOADED DRAWBAR** for easy maneuvering in tight spots

Gehl chrome-edged knives stay sharp . . . chop more tons of fine-cut forage. The new Chop-All keeps this important feature — and lets you select short, medium or long length forage with just the push of a lever on the new Select-A-Cut transmission.

More new features! Maneuver with ease in tight places by adjusting the new spring-loaded drawbar. Change positions as needed — right from the tractor seat. Also, a rigid tripod (optional) holds the forage deflector firmly in place for less twisting and vibrating . . . longer deflector life.

Many new features . . . plus famous Chop-All fine cut performance.

Six flywheel mounted, chrome-edged knives cut the crop from inside to outside (like giant scissors) against the long-lasting tungsten-carbide cutter bar. And, they're standard equipment!

"filled 19 silos . . . knives still sharp enough to shave with"

George Cramer, Peoria, Ill., bought a Gehl Chop-All to do his custom chopping because "it chops finer." After filling 19 silos this year . . . almost as many as a 2-silo owner fills in 10 years . . . Cramer reported, "The Chop-All's chrome-edged knives are sharp enough to fill 19 more."



Make us Prove it with a Demonstration!



GEHL BROS. MANUFACTURING CO.

Dept. FP-79-47, West Bend, Wisconsin

Please send more information on the Gehl Chop-All Forage Harvester. ☐ I am a student.

Name _____

Route _____ City _____

Province _____

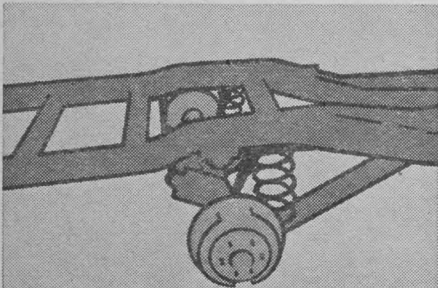
If your dealer isn't handling Gehl, have him contact one of these distributors:

QUE-MAR EQUIPMENT CO., 124 Ave. Labrosse, Pointe Claire, Quebec
FALCON EQUIPMENT CO., LTD., 299 Danforth Road, Toronto, Ontario
GRAIN BELT FARM EQUIPMENT LTD., 1920 First Avenue, Regina, Saskatchewan
NORTHWEST FARM EQUIPMENT LTD., Corner 7th Ave. & 6th St., East Calgary, Alberta
D. N. JAMIESON & SON LTD., 791-3 Erin St., Winnipeg, Manitoba

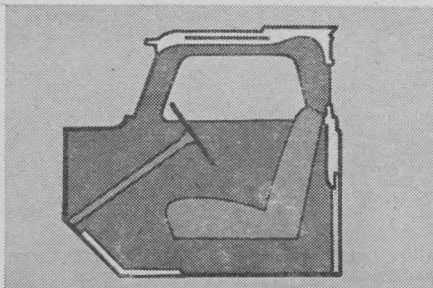
If you think you've got
the best riding Pickup or Panel,
and you're driving a GMC Light Duty
with full coil suspension
...you're right!

A GENERAL MOTORS VALUE

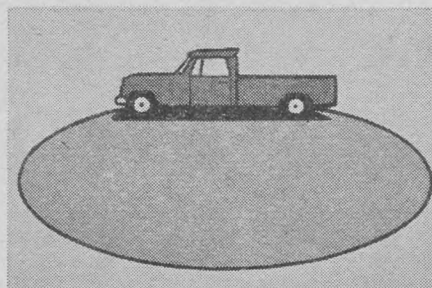
C910 1/2-ton Wideside Pickup



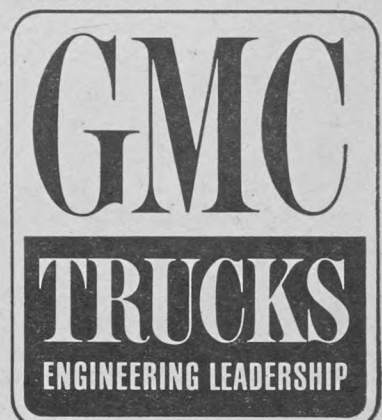
Big Load capacity
full coil suspension.



More quiet, comfort
with added insulation.



Easy manoeuvrability
with ball-gear steering.



A New Concept in Swine Breeding

Research findings at Ottawa may enable breeders to select parent stock on basis of blood protein types, before matings are made

BLOOD proteins, which are now under intensive study in Ottawa, may hold the key to such swine breeding problems as low conception rates. That's what Dr. Fred Kristjansson is finding in research he is doing at the Animal Research Institute.

The results of Dr. Kristjansson's work have received little publicity in this country until now, but some of the findings are being used in Denmark as a means to check the parentage of pigs entering testing stations there. This could be one further illustration of why that country's swine industry is so far ahead of most other countries.

The work has broad implications for the entire livestock industry. But Dr. Kristjansson describes just one example of how it could be useful. Low swine conception rates represent a serious cost to the farmer. He is hopeful that current findings may be the first step toward reducing this cost. While normal breeding methods (mass selection) will not improve conception rates significantly, detailed knowledge of individual gene effects such as he has observed, can lead to marked improvement, he believes. It could enable breeders to select parent stock on the basis of serum protein types (by a blood analysis) before matings are made.

In explaining his work, Dr. Kristjansson says he is really investigating basic genetics mechanisms in an effort to determine whether these can be used in improvement programs.

He explains that basic to all genetics and breeding work is the gene, or unit of inheritance which is the agent producing all heritable traits. Sperm and eggs of the pig contain 20 thread-like chromosomes. The genes are arranged in linear order along each chromosome. At the time of fertilization the 20 chromosomes from the boar pair up with the 20 chromosomes from the sow to form a single cell containing 20 pairs of chromosomes and their thousands of pairs of genes. This single cell is the miracle of life. It is the beginning of a completely automated, computer-programmed production system far more complex and intricate, and at the same time far more accurate, than the most advanced automation programs devised by man.

He says this is not simply a general rough analogy. It is based on facts resulting from recent intensive studies of what genes are and how they act. It now seems that genes are coded instructions which direct the pro-

duction of proteins and perhaps other biochemical entities. The proteins act as enzymes, hormones, etc., to direct the complex biochemical factory which makes up the living organism.

Since the control of protein syn-

thesis is one of the main functions of genes, he has been studying the proteins contained in pig blood serum. While 10 years ago, it was accepted that pig blood serum contained only four proteins, he now knows that it contains not less than 40, and, perhaps many more.

He has carried out detailed genetic studies of three "families" of proteins, involving eight different proteins. He now knows that their synthesis is controlled in a very simple manner by genes. The genetic control of these proteins is so well established that he can now use

serum protein analyses in parentage tests in much the same way as blood typing is used in humans.

Dr. Kristjansson reports that complete performance data is gathered on each pig from which blood is collected for serum protein analysis at the Animal Research Institute. He has just completed the first study of the effects of serum protein differences on performance. A long series of studies will follow, and, as it progresses, he hopes to learn more about the effect of individual genes on the ability of pigs to make a profit for the farmer. V

STOP PIG ANEMIA with RUBRAFER IMPROVED and the new VET-JECTA



Vet-Jecta—a real work saver. A quick and easy one man operation. Simply insert a cartridge of Rubrafer Improved in the unique Vet-Jecta and you're all set to inject 12 pigs, without reloading. Four squeezes on the trigger automatically measures out one dose. There isn't an easier or faster method!

Use the Vet-Jecta in complete safety. You won't impair the quality of your pig carcasses or cause profit reducing abscesses. Just use the Vet-Jecta as directed. Rubrafer Improved is recommended for subcutaneous injection (under the skin) behind the foreleg. If you prefer, you may inject directly into the ham without staining.

You get 'more than enough' in Rubrafer Improved.

IRON—each .84 c.c. dose contains the equivalent of 100 mg. of elemental iron...more than enough iron to prevent anemia and keep a pig growing vigorously during the critical 4 to 5 weeks before creep feeding.

VITAMIN B₁₂—each dose supplies 80 mcg...more than enough to meet a pig's daily needs until he's able to manufacture his own supply. Vitamin B₁₂ is essential for the formation of red blood cells, the lack of which can cause anemia even when sufficient iron is available.



Rubrafer Improved pays off in more pig pounds. Treated pigs have been shown to gain almost 3 times more than untreated pigs over a 4 week period. Hemoglobin blood levels of pigs treated with Rubrafer Improved were up, out of the anemia danger zone in only 1 week. Pigs injected at one week of age were protected for the entire pre-creep feeding period.

Ask your dealer about Rubrafer Improved and the new Vet-Jecta, soon!

RUBRAFER IMPROVED

Rubrafer and Vet-Jecta are registered Squibb trademarks.



SQUIBB

AGRO-VETERINARY DIVISION

New Breed for Underdeveloped Country

Country Guide editor Don Baron reports on how a Canadian scientist is helping one troubled Caribbean country move toward land reform by developing a new beef breed, and by seeking answers to cattle nutrition problems

IN recent years, it has become apparent to managers of the Central Romana Corporation, a huge sugar company in the Caribbean island of Dominican Republic, that the time was coming when it would be more economical to haul sugar cane from its fields with tractors rather than oxen. The company maintains a cattle herd of 45,000 head, most of which are required to maintain its 16,000-head force of oxen at full strength. When the day does come to replace its oxen, the firm must either dispose of the herd, or else turn it to some other purpose. That's why it began to plan a beef cattle breeding and management program a decade ago.

The wisdom of its move into beef cattle is becoming apparent now. The government of Dominican, aided by Alliance for Progress funds, is searching desperately for methods of land reform; for ways of turning back more land to the native Dominicans, and showing them how to earn their livelihood from that land.

This is a formidable problem. Some method must still be found to transfer the land. But once this is done, very little information is available on how the people can farm small parcels of land profitably. To the casual observer, the potential for the land appears vast. The climate of the country makes it one of the world's most promising grassland

areas. Beef cattle production will undoubtedly be a major industry in the future.

Today, in the absence of established farm research stations, the major source of information about farming in the country is the Central Romana Corporation itself. The Company utilizes 130,000 acres of land for its sugar cane operation, another 110,000 acres for its cattle enterprise.

Its livestock division is clearing hundreds of acres annually now and seeding it down to pasture. It has achieved a carrying capacity of about one animal for every 2 acres. But this is without the use of fertilizer. Undoubtedly, this ratio will be greatly improved in the years ahead, freeing more land to be turned back to the government, in moves toward land reform.

A pasture improvement and management program has been one of its projects. For instance, individual farms are divided into sections, and the cattle are moved from one to another every 3 weeks. New, more productive species of grass are being seeded too.

But it is the cattle breeding and management end of the program that is showing the most impressive results.

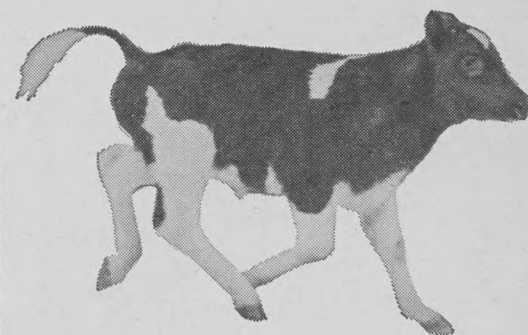
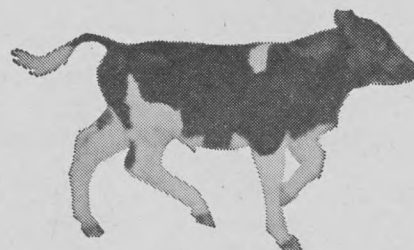
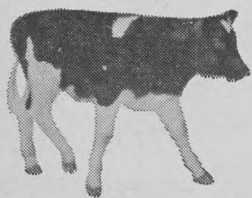
This program to develop a beef herd began 9 years ago, when a few of the native Romana Red cows from the oxen herds were split off into a separate cow herd, and bulls of the Jamaica Black and Jamaica Red breeds were imported for use on them. These Jamaica breeds have been developed recently in the country whose name they bear, using bulls of European breeds such as the Red Poll on the native Brahma-type

cattle. Succeeding generations have been selected to retain a resistance to heat and ticks. At the same time, cattle are selected for improved growth rate and for carcass characteristics of the European breeds.

In 1958, bulls of the big white Charolais breed from France were purchased. Three shipments of bulls have been brought in so far; about 35 bulls all told, of Charbray and Charolais breeding.

Supervisor of this program for the past 6 years has been a Canadian, Dr. Jim Henderson, who until recently was at the Ontario Veterinary

Typey heifers in the improved beef herd! These heifers are sired by Charolais bulls themselves, and out of Charolais-crossbred dams.



EXCITING NEW PROFIT OPPORTUNITIES

*from calves that
grow & grow & grow*

Don't sell off those unwanted calves from your dairy herd—take advantage of exciting new profit opportunities by feeding them through to market as veal with SHUR-GAIN Vealer—the complete and economical new high fat feed with the low, low feed conversion.

Most healthy calves, not required for replacement in your herd or for feedlots, which weigh at least 80 lb. at birth, will make "good" to "choice" veal in 9-11 weeks on less than 200 lb. of SHUR-GAIN Vealer, marketing them at about 250 lb. live weight. Developed and tested first at the SHUR-GAIN Research Farm, SHUR-

GAIN Vealer has proved itself to be an extremely economical new method of feeding veal calves, opening up new sources of income to thousands of dairymen across Canada.

Feeders report the feed conversion to be the lowest of any commercial feed ever used. Just over 1 lb. of SHUR-GAIN Vealer produces 1 lb. of live weight gain—results are often reported with feed conversion of less than 1:1.

Just look at the average performance from 26 different calves marketed recently from the SHUR-GAIN Research Farm, all fed on the regular SHUR-GAIN Vealer Program:



[Guide photos]

Yearling beef bulls are disappointing in size, although white ones, which are sired by Charolais bulls, weighed 509 pounds as yearlings, 79 pounds more than the dark Romana Red.

College, Guelph, and now is Dean of Veterinary Science at Washington State College.

This program is helping to beat one of the most serious cattle problems in the area too. For some reason, young cattle grow slowly. Calves grow well their first summer as they nurse their dams. They are weaned at 7 or 8 months of age weighing up to 400 lb. Then, growth seems to pause. A year later, they may weigh only 50 or 75 lb. more.

Dr. Henderson, in searching for the remedy to this problem, suggests several possible causes.

"We know," he suggests, "that there is a phosphorus deficiency in the soil. Poor calf crops and slow growth are classical symptoms of this."

At first, he thought he could solve it by feeding phosphorus. This element is now added to the drinking water of the beef cows, and it has undoubtedly helped.

But now Dr. Henderson is convinced the problem is vastly more

complex. For instance, he points out that Brahma-type cattle are notably slow in maturing. The native Romana Red cattle which make up the oxen breeding herds, and from which the beef cow herds are derived, had a generous infusion of Brahma-type blood in their make-up, to go along with the native creole and Africaans cattle. He attributes part of the slow growth to bloodlines.

Other nutritive deficiencies probably play a part too. Now, all beef cows are getting bonemeal and salt mixtures. Some of the cow herds are being given 3 to 4 pounds of molasses free choice per day, too (during the breeding season) to make up the general deficiencies that probably exist in the pastures.

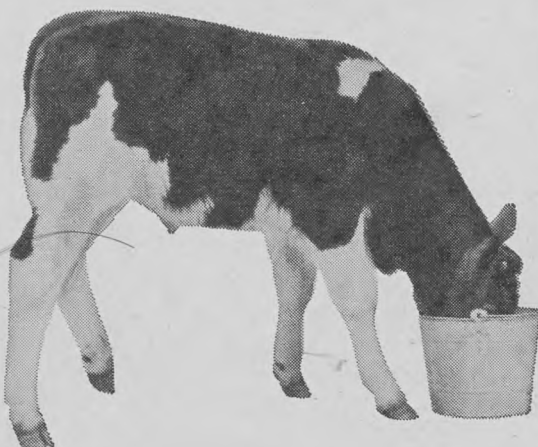
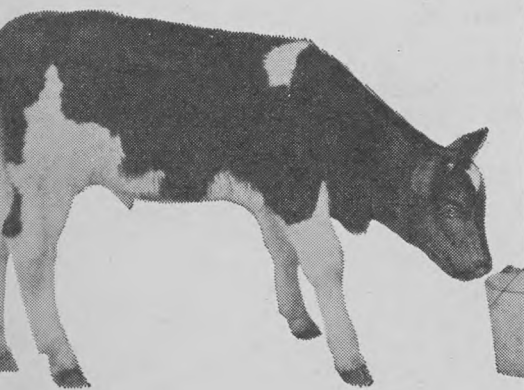
But biggest dividends so far may be coming from the breeding program, in which Charolais blood is being introduced. A group of 82 Charolais-sired bulls, born in 1962, out of the beef cow herd, outweighed bulls sired by Jamaica Red and Jamaica Black bulls, by 79 pounds as



The makings of a new breed? Several hundred of these white heifers comprise one of the developing beef herds at Central Romana. They are sired by Charbray bulls out of dams of the Romana Red breed. The calves are sired by Charolais bulls, so that they have about two-thirds Charolais blood. The aim is to develop cattle with the rapid maturity and good carcass quality of European breeds, while retaining the hardiness of the Brahma type at the same time.

yearlings, tipping the scales at an average 509 pounds as compared to 430 pounds.

This promising breeding program reflects Dr. Henderson's non-traditional views of cattle improvement.



No. of calves marketed	26
Average per calf	
Starting weight.....	94.1 lb.
Finishing weight.....	252.7 lb.
Weight gain.....	158.6 lb.
SHUR-GAIN Vealer consumed	181.5 lb.
Feed conversion.....	1:1.1

Plan right now to test feed your own calf—ask at your local SHUR-GAIN Feed Service for a veal calf record card and a bag of SHUR-GAIN Vealer. Start profiting from this exciting new feeding method.

To grow healthier, sturdier replacement calves for your dairy herd, use SHUR-GAIN Milk Replacer. 25 lb. replaces 250 lb. of whole milk—controls scours and starts calves right for your dairy herd.

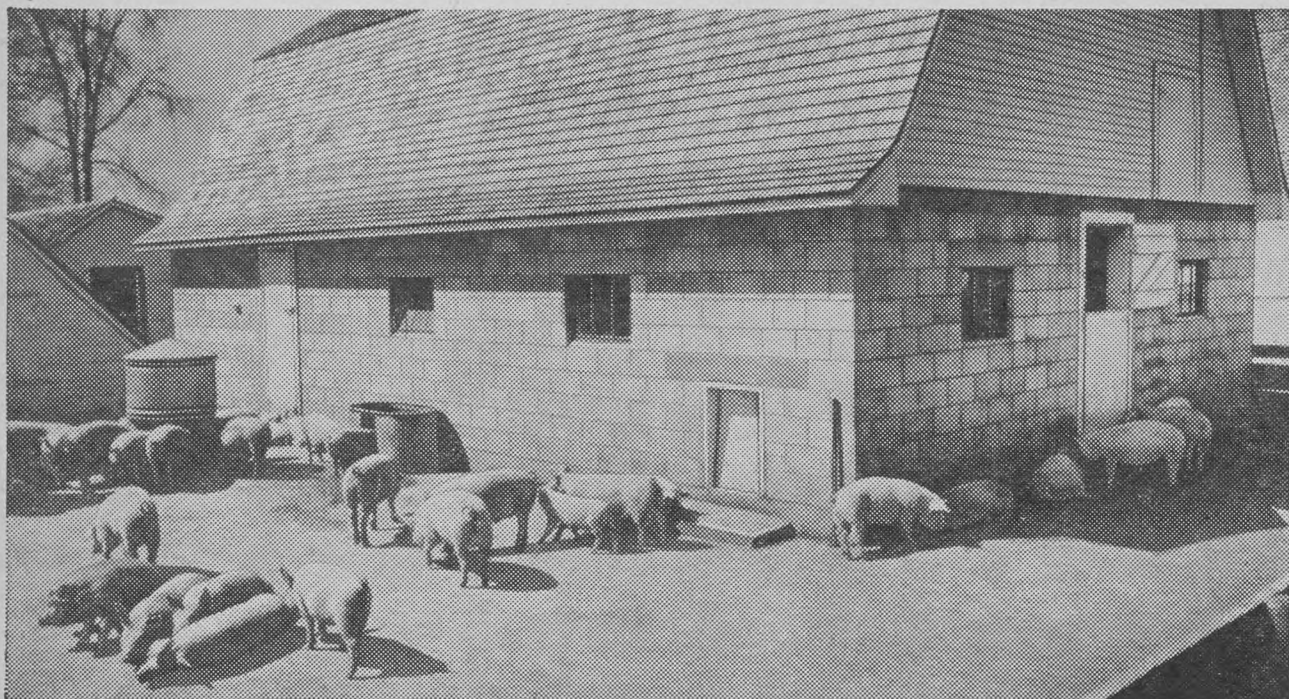


SHUR-GAIN puts the *GAIN* in **CALF PRODUCTION**

SHUR-GAIN FEED SERVICE MILLS your balanced feeding headquarters IN CONTRACT WITH CANADA PACKERS

for more pigs
per litter
more weight gain
per week

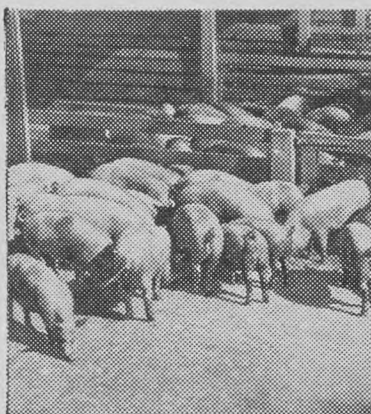
HOG HOUSES AND FEEDING FLOORS OF Concrete made with CANADA CEMENT



FEEDING FLOORS

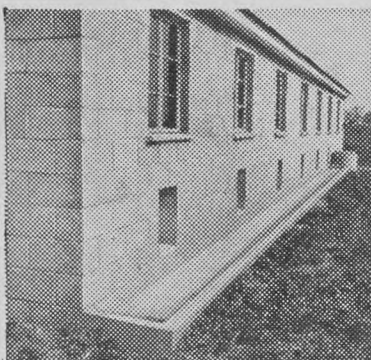
PENS

BOAR PEN



CONCRETE GUTTERS

FARROWING HOUSE



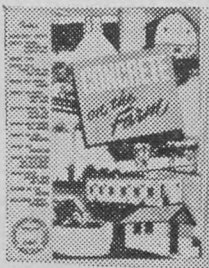
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It's a program in which a variety of bloodlines are being added to a large herd of breeding cattle. From this pool, selection is carried on to sort out the ones that are most suitable.

It's a program that is not unlike the one that has been used by the renowned Tom Lassater in the United States, who created the Beefmaster breed simply by throwing a variety of promising bloodlines together and selecting animals that met his particular needs; by mating "the best" to "the best."

Dr. Henderson is hopeful that with so large a breeding herd, (the beef cow herd numbers nearly 1,000 head at Central Romana) reasonably rapid progress can be made in producing cattle which are well adapted to conditions there. ✓

Hereford Bull Makes "Golden" Status

A PUREBRED Hereford bull, Lord Vern Standard 12P has received the "Certified Meat Sire" award. This award is in recognition of 10 steers, sired by Lord Vern Standard 12P, having been tested for rate of gain and carcass quality under regulations of Performance Registry International and have scored very high; so qualifying him for the "Certified Meat Sire" award.

Through the program of testing and giving recognition to beef type bulls the Ontario Beef Cattle Performance Association is making an effort to put high quality beef at reasonable prices on dinner tables throughout Ontario. Through the extensive breeding use of bulls known to be siring fast gaining, high quality calves both the beef producer and consumer will benefit greatly.

Lord Vern Standard 12P, who is owned by the Oxford and District Cattle Breeding Association, was bred by Jack Morris and Sons, Innisfail, Alta. Frozen semen from this bull was sent to Alberta where he was mated to about 200 cows, these resulting calves were put on the feedlot and slaughter test in Alberta. The bull will now be used heavily in Western Canada and in Ontario through artificial insemination. It is possible for him to sire as many as 10,000 calves per year. ✓

Beware of Nitrate Poisoning

DR. J. G. O'DONOGHUE, assistant director of the Field Division of the Alberta Veterinary Services Branch, says nitrate poisoning is a type of toxicity that develops when animals, particularly cattle, have eaten a large amount of feed containing nitrates or have drunk nitrate contaminated water.

This chemical is absorbed by the animal and goes into the blood stream destroying its oxygen carrying ability. An animal suffering from nitrate poisoning is actually suffering from suffocation.

Acute poisoning is most likely to occur in cattle eating oat hay or oat straw containing nitrates. Oats are

capable of concentrating fairly large amounts of nitrates if they are grown on soil which is rich in this element. The same thing can occur in certain weeds. Water wells are another source of nitrate poisoning. Shallow wells in barnyards where drainage from manure can seep in are particularly dangerous to both humans and animals.

The type of situation where you find acute nitrate poisoning is where cattle are eating at the butt of an oat straw stack. These animals can become sick and die within hours or even minutes if action is not taken. Usually they were all right the night before but two or three are dead in the morning with the rest staggering around with very labored breathing. An animal suffering from nitrate poisoning usually has very dilated pupils and the visible membranes turn a dark blue. Dr. O'Donoghue advises removing feed and water from animals suspected of having nitrate poisoning and calling a veterinarian immediately. V

How to Prevent Pneumonia

ALL forms of pneumonia, responsible for heavy losses in the swine industry, reach the most serious proportions during the winter months.

According to Dr. John Howell, pathologist with the Alberta Veterinary Services Branch, low grade pneumonias, due to viruses or bacteria, may be present in most animals in a herd without deaths or obvious signs of illness other than coughing or sneezing. Pigs in such herds, however, are frequently uneven in size and rate of growth. Also, their feed conversion rates are often lowered by varying degrees. Although these effects are not always obvious, they cause a serious drop in net returns.

Dr. Howell recommends the following management practices to reduce the incidence and severity of respiratory infections in swine herds. These practices will also greatly reduce pig scours.

Provide growing and finishing pigs with dry and draft-proof quarters. Give suckling litters extra heat. Keep living quarters as clean as possible. Clean and disinfect farrowing pens and crates before they are used. Disease causing germs build up in quarters which are not kept clean.

Provide pigs with adequate nutritious and well-balanced rations designed for the various age groups. Give pregnant and lactating sows and their offspring adequate amounts of vitamin A. Vitamin A helps to protect animals from respiratory infections. A deficiency of this vitamin predisposes them to these infections. Give all baby pigs iron regularly. They are much more likely to pick up respiratory diseases when suffering from iron deficiency anemia.

Carry out a regular deworming program. During the life cycle of the large round worm, the larvae migrate through the lungs of a pig causing irritation which can develop into bronchitis or pneumonia. In addition, the nutritional level of heavy parasitized pigs is lowered,

making them more susceptible to infections.

Watch weaners and other pigs closely for a week or two after they have been brought into a herd because moving them makes them more susceptible to infections including pneumonia. This is especially true during the winter months. Whenever possible isolate newly introduced animals from the rest of the herd for 2 or 3 weeks.

Dr. Howell advises seeking the assistance of a veterinarian for diagnosis and treatment of pneumonia. This will help the swine producer to

find out the basic cause of the disease and to get the drugs which are giving success in his district. Some drugs work better in one district than another due to the fact that one type of infection may be more prevalent in that area, he said. V

Feed Sweet Clover with Care

CATTLEMEN should be certain they have all their calves castrated and dehorned before they start feeding sweet clover hay

or silage, warns Dr. R. G. Urquhart, veterinarian with the Saskatchewan Department of Agriculture.

"Calves fed spoiled sweet clover may die of uncontrollable hemorrhage following castration or dehorning," says Dr. Urquhart. "Fatal sweet clover poisoning develops within 46 days in cows and within 15 days in yearlings."

The succulent nature of sweet clover and the heaviness of the stem predisposes it to spoilage. Weather damage, poor curing and haymaking technique prompt the development of molds. Well cured sweet clover



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LIVESTOCK

hay in good condition is usually not dangerous although absence of visible spoilage is insufficient evidence of safety. Cattle, sheep and horses may be affected. Cattle are the foremost victims as they usually accept moldy hay more readily than other species. Normal sweet clover contains Coumarins which are harmless.

Clinical Signs

Large accumulations of liquid or partially clotted blood develop under the skin anywhere on the body. Common sites are points of stress, bony prominences such as the knee and hock joints. Tarry manure and red-colored urine may be noticed if hemorrhage is occurring into the digestive or urinary tract.

The danger of poisoning may be reduced by not feeding more than 25 per cent sweet clover in the roughage portion of feed. Weekly alternation of sweet clover with other roughage will also reduce the danger.

Treatment of affected animals requires the transfusion of blood (4 litres per 1,000 lb.) from an animal which has not been fed sweet clover. Animals less severely affected may be given massive doses of natural vitamin "K." Vitamin "K" has proved to be superior to its synthetic, called Menadione.

Preliminary signs of poisoning and deaths in new born calves may be confused with several infectious and metabolic diseases. As rapid diag-

nosis and treatment are essential to prevent fatalities, the assistance of a qualified veterinarian is essential. No animal should be castrated, dehorned or undergo surgery if it has recently been fed sweet clover hay or silage. V

Beef Testing Begins to Pay Off

A TESTING program designed to search out bulls that will sire meatier more profitable calves is beginning to pay off. Idea of the program was conceived 3 years ago between officials of the Ontario Association of Artificial Breeders and the Alberta Beef Cattle Improvement Association. The Albertans agreed to help find suitable bulls. These bulls would be shipped to the bull studs in Ontario and, through their facilities, be made available for breeding the cows back in the West. Steer calves from these cows would be placed in a feedlot for testing; slaughtered and checked for cutout; then followed right through to the meat counter to see the actual dollar value difference between lots.

A group of steers fed at Strathmore, Alta., have now met the requirements for the coveted "Golden Certified Meat Sire" award presented by Performance Registry International. Previously, six American bulls had qualified. Certificate number 7 went to the Charolais bull

Carlos, whose crossbred steers had been tested in Ontario.

Certificate number 8 was awarded to Silver Prince 7P, a Hereford bull bred by James Hole of Alberta, now owned by Central Ontario and Waterloo Cattle Breeding Associations, who also own the Carlos bull. He was artificially mated with a group of Hereford cows in Alberta and the resulting steer calves chalked up a really outstanding performance record. Tested with nine other straight-bred Hereford steer groups in Western Feedlots Ltd., Strathmore, Alta., here is their record:

The highest average weight at the end of test, 1,052 lb. at 437 days of age.

The highest average daily gain on feed, 2.72 lb.

The highest warm dressed carcass weight, averaging 599 lb.

As a final step, all Strathmore tested steers are compared as to actual dollar value of carcasses. The steers sired by the 7P bull averaged \$44.40 per head more in value than the lowest group of steers on test, including all breeds. V

Bulls Outgain Steers

FEEDING trials at Penn State University show dairy bulls reached 800-lb. weights at 10 months while dairy steers reached that weight at 11 months. To reach 1,000 pounds took 13 and 14 months respectively. The bulls also required an average of 414 pounds less feed than the steers to reach slaughter weight. V

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John Pahara farms 350 acres of irrigated land near Lethbridge, Alta. Sheds, he feels, are necessary to provide cover for feed bunks and shelter for cattle.

John Pahara started in the feed-lot business by feeding out calves from 100 cows, which were kept as a cow herd. In the mid-forties he started buying in feeders. Today he finishes 1,000 steers a year in three lots. He likes the business he's in, and believes in doing a good job — which means a profitable one. That's why his choice of feed is "Miracle" 32% Fattener Supplement which he uses with grain.





**The meeting
lasted 'till five;**

When I came home the wall was finished!

On Thursday I said, "Let's have a feature wall in the living room!"

Bob said, "How about Teak?"

I said, "Wonderful! When?"

Bob said, "Saturday afternoon. I'll get some PV Teak Woodgrain. It's pre-finished, random-planked, doesn't cost much. No painting, no staining, no sanding, no waxing, no joints between panels to hide. OK?"

He started in after lunch. Margaret helped him. (*Imagine!*)

When I came home she was reading the funnies, and Bob was out working in the garden...

Next Thursday I'm going to drop a hint about rec' rooms. Just casually. Thursday seems to be my day. Teak? Elm? Willow? Chestnut? Magnolia? I don't mind which, really. They're *all* lovely. Margaret can decide.

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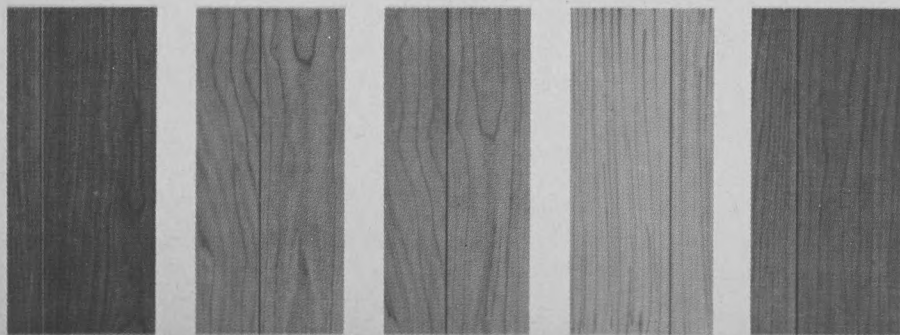
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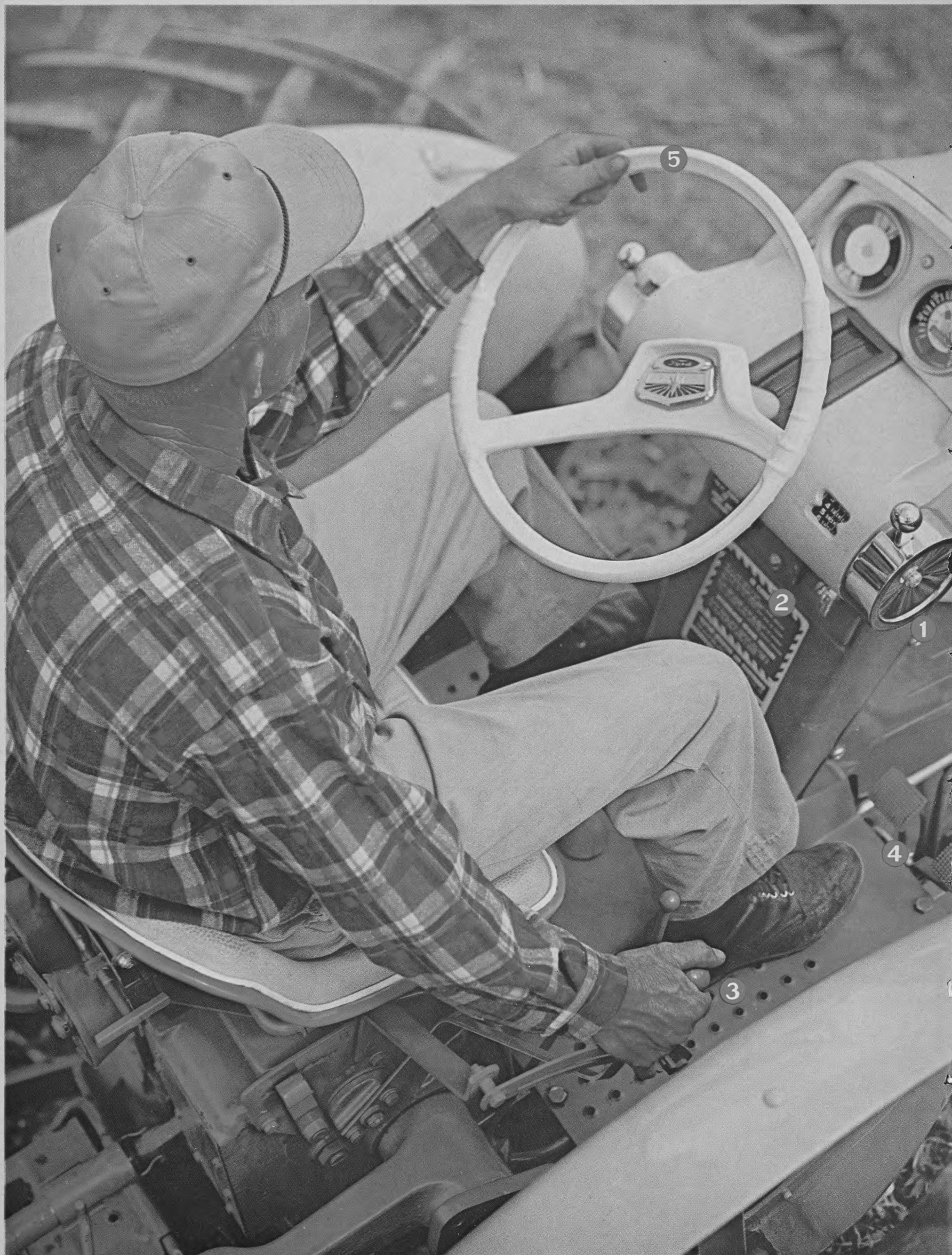
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- ① **Select-O-Speed Power Shift**—the Ford first that lets you shift to any forward gear, non-stop.
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MAKE PASTURES PAY!

A Guide report showing how to develop a sound pasture program

JUST about every province in this country has set a goal to double its livestock output in the next few years. Much of the emphasis is on cattle. Since more cattle on farms will mean more forage crops will be grown, there is an increasing interest in forage crops today.

There are plenty of reasons to justify this interest too. Forages, properly grown and handled, represent cheap, high quality livestock feed. A well-fertilized and well-managed pasture, when grazed by steers, can result in several hundred pounds of beef being produced per acre. Last year Ontario's pasture champion used irrigation and careful grazing practices to take off \$400 worth of milk per acre, with his dairy herd. Jim Campbell of the Manitoba Department of Agriculture says the cost of producing a pound of total digestible nutrients through hay is half the cost of producing it through cereals. He advises, "Consider forages as part of the cropping system."

Grass specialist O. G. Bratvold, in Alberta, says, it's a question of looking at the principles of pasture management, selecting a program to suit the individual farm, then getting busy and putting it into practice. He lists three important principles:

1. **Graze pasture when plants are young and high in protein.** As the plants mature, protein content decreases. In a fully-matured plant that has come into head, there is little protein left. Young immature plants have higher feed value and digestibility, and better taste. That's the kind that make profitable grazing.

2. **Use proper varieties and mixtures.** Don't forget, Bratvold urges, that grasses grown alone do not yield as well as when grown in combination with a legume. And don't forget that legumes are higher in feed value than the grasses.

3. **Proper stocking rate is essential.** Put too many cattle on the pasture, and they will over-graze it, injuring the forage stand. This results in a weakened root system, slow growth, and perhaps killing out during drought or severe winter weather. On the other hand, under-grazing is serious too. Without enough animals to graze

off the pasture, there is waste. Bratvold suggests that one way to prevent over-grazing during periods of slow growth is to provide supplementary feeding in the form of hay or silage. When forage growth is rapid, prevent waste by harvesting surplus as hay or silage.

Every farmer must devise his own grazing system and Bratvold lists four which can be considered.

Continuous grazing is the simplest system. It's the traditional one in which cattle are turned into the entire pasture area and remain there throughout the season.

Rotational grazing, under which the pasture is divided into several separate fields and each is grazed individually in rotation. The principle is to harvest the pasture growth, then remove the animals allowing for rapid re-growth.

Strip grazing is a refinement or more intensified program of rotational grazing. As the name implies, a fresh strip of pasture is provided for the stock each and every day.

Zero grazing is the fourth system listed. Under it the livestock remain in the feedlot. The operator goes to the pasture with a forage harvester, cuts the forage, and hauls it to the animals.

A fifth system which is gaining popularity in Ontario could be called **year-round silo feeding**. It's somewhat similar to zero grazing in that the livestock remain in the feedlot the year around. However, the forages are cut when they are ready and put into the silo. Feeding continues from the silo the year around.

Bratvold suggests that anyone must consider the following factors before selecting a grazing system for his own farm: (1) The annual rainfall in an area might limit production. (2) Fluid milk production justifies higher management costs. (3) Near urban and industrial centers, operators must get maximum per acre returns. (4) A large herd can justify added costs for labor and equipment, and (5) inexperienced operators should not start with the most complicated system.

How do these programs work out in practice? Fred Cohoe of Oxford County, Ont., has one of

this country's most productive Holstein herds. His 60-cow herd has the highest Breed Class Average in the County. It averages an actual production of about 14,000 lb. of milk and a BCA of 137½. Pasture plays a large part in his feeding program. Fred fertilizes his pasture fields heavily, and manages them carefully. He strip grazes his cows, moving the electric fence twice daily. He takes some pasture off for haylage so the cows always have fresh immature growth to graze. At times, he grazes cows on oats and moves them back to the pasture again when the pasture fields are ready. It's careful management all the way.

Aubrey Livingstone who farms near Brampton, Ont., has carried his pasture program still further. Livingstone has a loose housing setup for his cows and a fence-row feed bunk. He zero grazed his 85-cow Holstein herd for several years. He still calls zero grazing a good half-way measure between pasturing the cattle and feeding them by his present method, but there were too many problems with zero grazing.

In wet weather, daily clipping resulted in soggy fields being cut to pieces by heavy equipment. Overly-wet direct-cut forage didn't feed too well either. If not used immediately, it could heat and spoil rapidly. At times, when the forage was making vigorous growth, it often passed its peak of feeding value before he got to it. This left the cows eating mature, stemmy feed. During dry spells, the problem could be reversed. Forage growth didn't always keep pace with the herd's appetite.

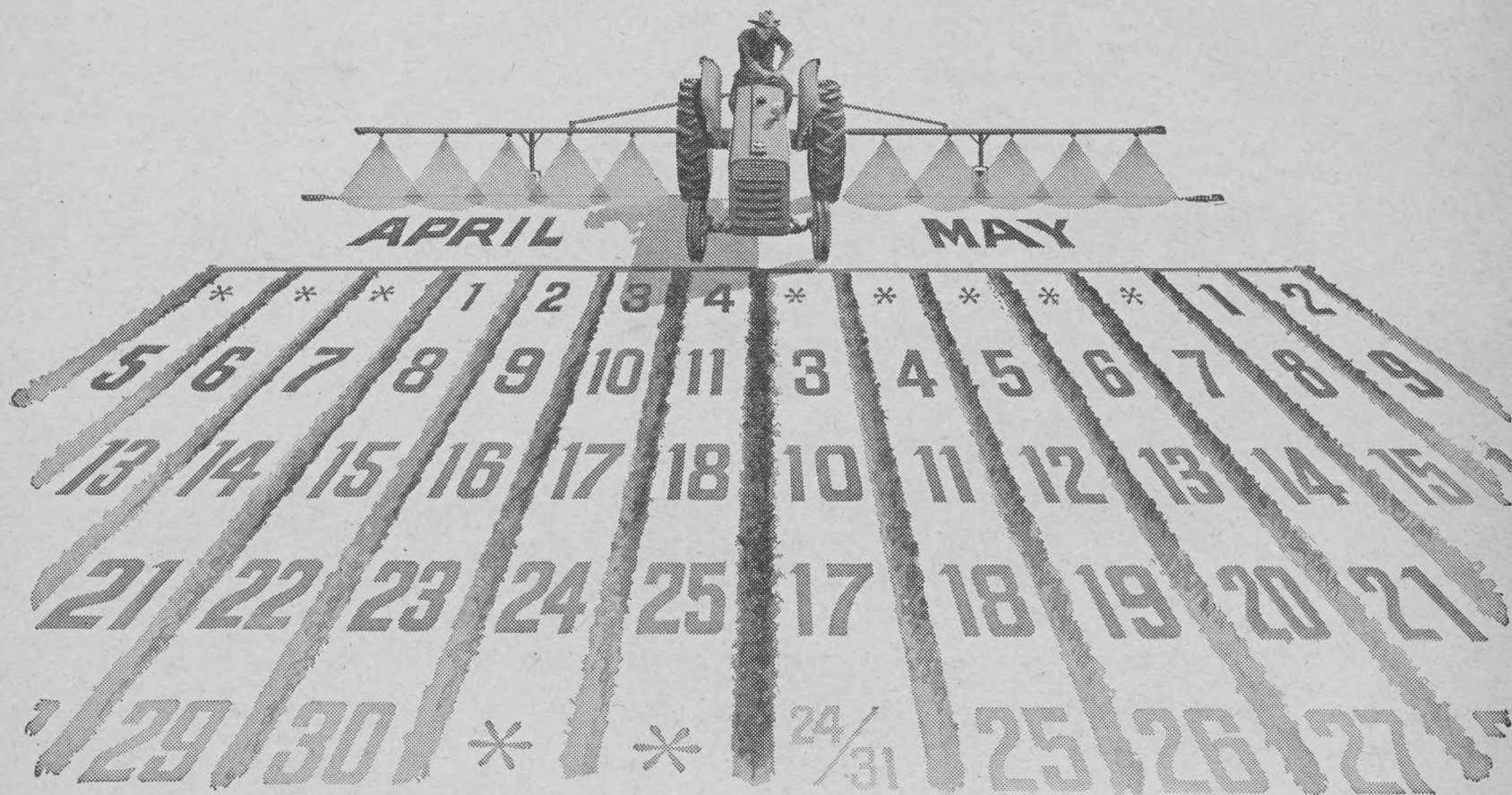
In 1962, a shortage of fresh forage forced Livingstone to turn the cows out to pasture. Bloat nearly killed two of his better ones. That's when he slammed the gate shut and said, "Never again." He turned to year-round silo-feeding. Last summer, the cows didn't get out to pasture at all.

Aubrey ships fluid milk to Toronto. His loose-housing setup includes a silo fitted with a mechanical unloader, and his feeder is fitted with an auger.

Last spring, when the last corn silage came out of the silo, he began to refill with haylage and grass silage. Throughout the summer, this was augered to the feed bunks morning and night. Free choice hay was available from the hay barn. Grain and concentrates were fed in the milking parlor, and the cows used a 4-acre field for exercise. By fall, when the grass silage was used up, he refilled the silos with corn.

Looking back, Livingstone says his cows milked just as well as they would have under normal pasture or zero grazing programs. It was an easier and cheaper program than zero grazing too. V

Choose your own time, but solve the problem of wild oats before they arrive



Kill wild oats as they germinate

Yes, kill wild oats below ground and seed when you choose. Overcome the wild oat reason for delayed seeding and take advantage of a full growing season. Just circle the most convenient day on your calendar this spring (as much as four weeks before seeding and up to 5 days after), and let AVADEX or AVADEX BW solve your wild oat problem before it ever becomes one. Seed earlier ... harvest earlier ... store crops dry ... or plan a clean up crop, with more bushels per acre as well.

CHECK THESE ADVANTAGES:

☐ AVADEX can be applied up to four weeks before seeding. This means you can treat your wild oat land early on a day of *your* choice and not have to risk some critical control measure later on when

untimely rain or wind can prevent treatment.

☐ AVADEX and AVADEX BW provide long lasting control. Even when treatment is carried out four weeks before seeding, the *residual* action of AVADEX and AVADEX BW will kill wild oats well into the growing season.

☐ For wheat and barley AVADEX BW can be harrowed in immediately *after* seeding, or up to five days after seeding, whichever is most convenient. Harrows can be attached to sprayers to mark the sprayed area and make the treatment a one man operation.

☐ AVADEX and AVADEX BW knock out wild oats as they germinate. Since affected wild oats grow no larger than sprouts, virtually no wild oat competition

develops in the early crop. Cash crops absorb full benefit of soil moisture and fertility.

☐ AVADEX and AVADEX BW can eliminate the need for delayed seeding where wild oats are the cause of delay. Earlier seeding permits the use of longer maturing, heavier yielding varieties.

☐ With AVADEX, flax can be grown as a clean-up crop. Treatment can be made two, three or four weeks ahead of seeding time, without loss of chemical or long lasting control action.

Ask your farm supply dealer for the factual combined AVADEX-AVADEX BW manual featuring step-by-step instructions on wild oat control. Or write: Dept. D, Monsanto Canada Limited, Box 147, Winnipeg, Man.

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MONSANTO'S WILD OAT KILLERS

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Pasture Gains May Depend on Winter Keep

STEER calves overwintered on rations of wheat straw and grain suffered greater weight losses when first placed on pasture, and had somewhat lower overall pasture gains than did steers overwintered on brome hay and grain.

The results of a test, conducted over the past year at the Melfort Experimental Farm, to assess the effect of three different overwintering rations on the performance of steers during the winter and when subsequently placed on pasture are summarized in the following table.

Winter Ration	Lot 1 Brome Hay & Barley	Lot 2 Wheat Straw & Barley	Lot 3 Wheat Straw & Wheat
Average feed consumption/head over the 183-day wintering period . . . lb.			
roughage	1,724	1,605	1,608
grain	494	762	958
supplement	74	272	85
Average winter gain/head . . . lb.	178	195	198
Average winter feed cost/head . . . \$	36.97	38.44	39.20
Average winter feed cost/lb. gain ¢	20.76	19.73	19.84
Loss/head when first placed on pasture . . . lb.	18	37	27
Days to recover loss	5	14	12
Average gain/head on pasture (105 days) . . . lb.			
Implanted Steers	236	217	225
Unimplanted Steers	213	173	185
Average	224	194	205
Total winter & pasture gain/head . . . lb.	402	389	403
Est. value of gain at 20¢ . . . \$	80.40	77.80	80.60
Less winter feed cost . . . \$	43.43	39.36	41.40

The results indicate that straw may satisfactorily provide the roughage portion of the overwintering ration for steer calves provided it is properly supplemented to make up

deficiencies of energy, protein, mineral and vitamin A.

Because of failure to adjust feed allotments frequently enough the steers overwintered on the hay and

barley ration failed to make as much winter gain as did those in the other two groups. This would have the effect of tending to increase the feed cost of winter gains and of increasing pasture gain somewhat. As the test was conducted the steers fed the hay and barley overwinter, returned somewhat more than those fed wheat straw as roughage. Where hay is expensive in relation to other overwintering feeds, the reduced gains on pasture as a result of feeding straw during the winter, could well be offset economically by lower wintering costs.

Hormone implants (administered to half the steers in each group at the start of the grazing season) caused more marked increases in the pasture gains of steers overwintered on the rations containing straw than in the case of steers overwintered on the brome hay and barley ration. Because of this, steers fed on the "straw containing" rations over winter and implanted at the start of the pasture season outgained the steers fed hay and grain only.

Don't Overlook Millet for Dairy Ration

GROUND millet can be used satisfactorily in grain mixtures for dairy cows to at least 40 per cent of the ration, Charles G. M. Edgerly, assistant professor of dairy husbandry, North Dakota Agricultural Experiment Station, concludes from recent research trials with millet.

Edgerly said the finer ground millet mixtures may require more time for the cows to eat feed. Milk production and body weight gains also tend to be greater for cows fed ground millet mixtures.

"The protein level of the grain mixtures for cows receiving good quality hay can be as low as 10 per cent and give equal results in milk production and body weight changes," Edgerly says. "Mixtures of ground corn, oats and millet are good supplements for alfalfa hay."

New Milk Pricing

PRESIDENT JOHN DICKSON of the Dairy Farmers of Canada, in addressing its annual meeting, advocated a policy of equal price for equal quality of milk. He went on, "If you wish to tell me that milk manufacturers cannot possibly pay the same price as fluid milk distributors, I can only say that these are things we are going to have to consider and contend with; perhaps blend pricing is the answer, it's one of many things we are going to have to consider."

Dickson went on to say that dairy farmers will not permanently resolve the problems facing them on a market basis or on a provincial basis. He said there is a very good chance of resolving them on a national basis. It is in this capacity he stated that Dairy Farmers of Canada can fulfill its most important role.

Dickson said there is no traditional dairy country in the western world which doesn't have a larger measure of regulation of the dairy industry than we have in Canada. It is largely a question of who does the regulating.



The Bassano Unit is 285 feet long and has 36 feeder pens. All cattle can be weighed individually in 2½ hours, and fed in about one hour.



One of the first pens of steers to be placed on test at Bassano. Experimental feeding began in November, 1963.

GUIDE TO BETTER BEEF BETTER FEEDING HIGHER PROFIT

The new Master Feeds beef research unit at Bassano, Alberta, working closely with the "old" beef cattle unit at Master Feeds Research Farm, will provide Master Feeds with the most comprehensive knowledge of beef cattle feeding and management, under Canadian conditions, that any feed manufacturer possesses. Such knowledge will be passed on to the beef cattle industry through Master feeds and Master programs . . . in the mutual interest of feeders, dealers, and our own organization. This is the underlying purpose of our investment in the Bassano unit. Incidentally, it is clear proof of our confidence in the future of beef production in Western Canada. Keep in touch with your Master dealer. Master Feeds, division of Maple Leaf Mills Limited, Saint John, N.B., Montreal, Toronto, Winnipeg, Calgary, New Westminster.



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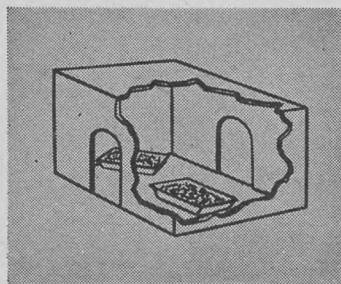
New Tri-Ban should not be confused with old-fashioned rodenticides. It is a new scientific formulation with two flavours rats love.

Here's how Tri-Ban outsmarts rats 3 ways:

- 1 Each package of Tri-Ban gives rats two food flavours they prefer—meat and grain.
- 2 Both formulations also contain Nest Nuggets—the carry-home bait for killing in the nest. Rats carry them back to their young or store them for tempting snacks later on.
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Kills mice, too. No need to buy two products. Mice love Tri-Ban, too, and it effectively eliminates them.

Every rat you kill can save you \$40 a year. In just one year, a single rat can do up to \$40 in damage. Rats raid the granary, destroy food supplies, kill poultry, undermine buildings, spread disease to man and animals.



How to use Tri-Ban. Place feeder trays of Tri-Ban in easily constructed bait stations. A wooden box with a small hole cut at each end is ideal.

End your rat or mouse problem now with new Tri-Ban. Ask your dealer for details or write:

Pfizer Company Ltd., Agricultural Division, Montreal, P.Q.

NEW
Tri-Ban
The new guaranteed rat killer

Battery Brooders for Poult

TURKEY raisers interested in reducing brooder mortality, as well as labor in caring for poults, often raise the question of using battery brooders in place of the customary floor brooders.

R. M. Blakely of the Swift Current Experimental Farm, Sask., says these have been used for many years by nutritional research men for conducting experiments with poults.

Results have been highly satisfactory. At the farm laboratory poults are regularly carried to 6 weeks of age in battery brooders. However, conditions under which feeding experiments are carried out differ somewhat from the commercial raising of large numbers of poults. Every environmental condition must be as ideal as possible so as not to interfere with the particular nutritional

study being undertaken. Consequently, only a small number of poults are placed in each quarter or half deck of the batteries.

Under the more practical conditions of commercial rearing, batteries would be required to handle the greatest number of poults that could be accommodated. The extremely rapid growth rate of poults would thus soon create an overcrowded condition. The greatest danger under these conditions would be shortage of feeder space and consequent uneven growth rate.

The number of day-old poults placed in a section of a battery brooder should never be more than twice the number that can feed at the same time. This amount of space should be sufficient to handle them until they are a week to 10 days of age after which they can be transferred to floor brooders.

If paper plates filled with starter are placed inside the battery brooder for the first couple of days poults seem to learn to eat more readily than on the floor, with fewer "starve-outs" resulting.

Most commercial battery brooders are designed for chickens and have half-inch mesh floors. These are not satisfactory for turkey poults since they catch their hocks in them. It is necessary to replace them with three-mesh-to-the-inch wire screen or place a piece of the latter over the main resting area under the heating pad.

Because of the large number of poults confined to a small area a power ventilation system is necessary to provide oxygen and to remove odors. A sturdy cart is also necessary into which the droppings pans are scraped once or twice a week, depending on the age of the birds.

The high capital cost of battery brooders may, in some instances, offset the advantages gained in switching from floor to battery brooding during the first 2 weeks, said Blakely.

eggs lowers the feed conversion figure by 1.1 lb.

The amount of feed required by a bird per day is also related to the energy content of the ration. On a high energy ration proportionately less feed is required for production compared with a low energy ration. Although high energy feed may be more expensive per lb. it can easily result in lower production costs, hence feed values should be calculated on the basis of the cost required to produce a dozen eggs or 1 lb. of poultry meat rather than on the cost per ton of feed.

Boost Egg Quality

WARM weather usually means a drop in egg quality. But you can reduce the number of lower quality eggs, says Prof. John Walker of the Ontario Agricultural College. Here are a few simple rules:

- Gather eggs 3 or 4 times a day, clean them, and put them in a holding room at 50° to 55°F. and a relative humidity of about 75 per cent.
- Ship eggs twice a week, at least, if quality seems to slip.
- Keep feed consumption at a maximum, not only to prevent a drop in egg quality, but also to reduce a production slump. Give the hens fresh feed and water in the morning, when they come off the roosts, and in the evening when they are going back to the roosts. They eat more in the cooler periods of the day.
- The hen house should be well ventilated to keep birds more active and in better health.

Controlled Environment Pays Dividends

HENS produce more eggs when laying house temperatures range between 40 and 80 degrees, according to Paul Walther of Iowa State University. Tests there proved that when temperatures fell below 40 degrees feed consumption increased. When the temperature rose above 80 degrees production fell and egg-size dropped.

Walther pointed out that good insulation in the poultry house helped stabilize environment and in his tests paid for itself within 4 or 5 years.

How to Calculate Feed Efficiency

THE Purdue University Extension Service has devised a formula for calculating poultry feed efficiency. Yearly feed consumption per hen is based on the formula 25 plus (8 x weight of hen) plus the number of eggs laid during the year divided by 7. Thus a 4-lb. Leghorn would need 25 plus 32, or 57 lb. of feed just for maintenance. To lay 175 eggs she would require 25 lb. more of feed for a total of 82 lb. This would give a feed efficiency of 5.6 lb. of feed per dozen eggs. To produce 245 eggs, considered a good flock average, only 10 lb. more of feed would be necessary. This 92 lb. of feed represents a feed conversion of 4.5 lb. per dozen eggs. The extra 70



Hahn Hi-Boy sprayers are also gaining popularity for spraying truck garden crops, such as beans, peas, potatoes, tomatoes, corn, berries, and other fruits. Made by Hahn, Inc., Evansville, Ind.



Why waste a tractor and extra help?

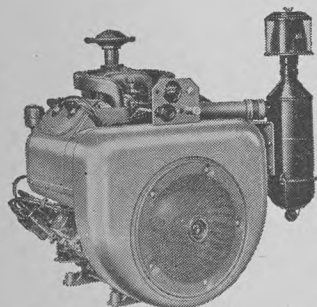
You can drive this sprayer

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So you don't need a tractor or extra help for hauling and spraying. You can get into fields earlier in the year for weed and pest control, fertilizing and side-dressing, defoliating and topping. Being much lighter, the sprayer minimizes compaction and crop damage.

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2. *This new, highly soluble Aureomycin is specifically designed for use in water proportioners, but can also be used in gravity flow systems.*

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4. Its higher solubility allows solutions to be made four times more concentrated than regular Aureomycin Soluble. (Each 4 oz. jar contains 25.6 grams of antibiotic.)

5. At room temperatures, Aureomycin Concentrated Poultry Formula remains stable in all solutions for 24 hours.

6. *And remember: new Aureomycin Concentrated Poultry Formula comes from Cyanamid.*

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trademark for Chlortetracycline

It Pays to Get Stung —Sometimes

SOMETIMES a man can get stung and still come out on top. Fred Merk, whose Saskana Dairy Farm lies about 5 miles south of Saskatoon, became so crippled with arthritis he had to sell his dairy herd. At that time he kept a few hives of bees as a hobby. But he also found it hard to handle the bees. In fact, he handled them so roughly

he got badly stung many times that summer. Then, miraculously, his arthritis began to go away. About 4 years ago he found he was well enough to get back into the dairy business, so he went to Ontario and bought a new herd of registered Holsteins.

Fred's 26-cow milking herd contains 4 cows which produce about

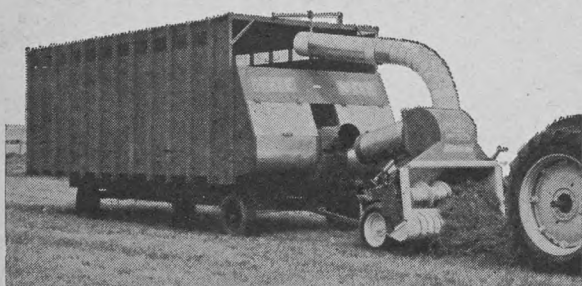


Fred Merk and his 300-gallon bulk tank.

[Guide photo]

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Yes! A McKee Grassland Harvester is the best; simply because you can do so much with it.

It is the only truly One-Man Harvester on the market; yet it can be used as a field machine like other makes if you wish. A standard crop blower is used for unloading.

We make the only forage harvester that combines three (3) different cutting principles.

Grass is "flail-cut" using 154 thin sharp knives—no guards or sickle knife to clog up. Simply drive into the field and go to it.

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90 lb. of milk per day. Daily production of the rest of his cows is from 45 to 58 lb. In a 305-day milking period the herd gave 598 lb. of butterfat.

"If you want good production you need a combination of good stock and good feed," he said.

Fred's section of land produces wheat, oats, barley, hay and pasture. About 200 acres a year is summer-fallowed. Part of his winter hay supply comes from a quick crop of oats and barley sown on 120 acres of the summerfallow, and from 120 acres of oats sown on the wheat stubble. For spring and summer pasture, Fred has 50 acres of brome,

and for late summer and fall, a special 30-acre pasture sown to oats and fall rye which allows the herd to graze right until freeze up. The latter is heavily fertilized with manure to keep yields high.

The cows are fed grain and a 32 per cent dairy ration twice a day (at milking time) throughout the year. During the off season, each animal gets about 8 lb. of beet pulp up until the pastures show a good growth in the spring. In this same period, farm-grown hay is alternated with a timothy-crested wheat hay which Fred has to buy. He believes that a little variety in the ration helps milk production too.—C.V.F. V

How to Cut Mastitis in Half

In 9 months, 150 Ontario dairymen halved mastitis infection in their herds

EVERY dairyman knows the cost of mastitis in his herd. It's measured in sick cows, in wasted milk, in veterinary bills. For many, it's a continuous cost they can't escape. Now, a pilot study, set up a year ago by the Ontario government to see if mastitis can be mastered, has been completed with promising results.

The program was carried out in the Ridgetown area, and involved herds from several surrounding counties. Administered by Dr. Ken McEwen of the Ridgetown Veterinary Laboratory, it called for enrollment of a group of dairy herds; a thorough and continuous testing program of each cow; then an all-out attack on infections to see if they could be brought under control.

Despite the fee of \$1 per cow which was charged, 150 herds, with 3,780 cows, were signed up. Within the first 9 months, the number of cows positive to mastitis in laboratory tests, was sliced almost in half. Infection was reduced from 19.7 per cent of the cows, on the first test, to 10.37 per cent 9 months later. The number of infected quarters was reduced from 8.85 per cent to 4.8 per cent.

Owners were enthusiastic about the program. Despite the charge of \$1 per cow, 141 herds have been signed up for the second year of the program. Only 22 of them are new

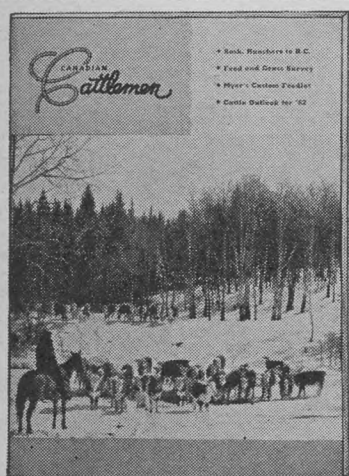
ones. This means 119 of the original 150 are back again for another year.

The results offer proof that mastitis can be controlled. They also raise a couple of interesting possibilities. Ontario now has five regional veterinary laboratories. Thus it would be physically possible to provide mastitis control programs for nearly every interested farmer in the province.

The results also raise the possibility, in Dr. McEwen's mind, of a mastitis recognition of certification program for dairy herds. Several such programs are already in existence in various states of the U.S. They help increase the value of cattle sold from the herds and may even help to increase milk consumption by emphasizing quality milk. Dr. McEwen suggests a possible name for such herds: Mastitis Managed Herds, or for those who like the abbreviated approach, "Double M" herds.

Neither of these programs has come into effect as yet, but they do rank as lively possibilities.

With his original opinions of mastitis control now bolstered by a year's experience, Dr. McEwen emphasizes that mastitis is a management problem. Sound cow management can help keep it under control; mistakes let it flare up. He also suggests that it's not just a farm problem—but also a problem of the industry. It leads to



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sick cows, high production costs, and lower quality milk. As a public health problem it can result in indiscriminate use of antibiotics.

The pilot program was an impressive demonstration of what can be accomplished when groups work together. Members of all branches of the Department of Agriculture including agriculture representatives, dairy branch fieldmen, and Dairy Herd Improvement Association personnel were asked to support it, and help enroll dairy herds. Local veterinarians were called in. Dr. McEwen called meetings to explain the program. Then, sample bottles were delivered to each herd owner.

"You must diagnose cases, then cure them," Dr. McEwen explained.

Herd owners took samples of milk from each quarter of each cow. The samples were picked up and returned to the Veterinary Laboratory for bacteriological examination.

When infections showed up in the samples, the laboratory determined what organism caused it, so the proper antibiotic could be prescribed. The report was returned to the herd owner and to his local veterinarian, who supervised the treatment.

After the first test, Dr. McEwen began to visit herds which had a high incidence of the disease. He often went back at milking time to get further samples. On private visits to farms, and at meetings with co-operating farmers, he talked about ways to prevent mastitis.

Here are a few points he made:

- Check milking machine pressure if the pump won't handle the load, the milker can't milk out the cows fast enough. Slow milking irritates teat tissue, causing trouble.
- Check for cleanliness of pipes.
- Use individual towels when washing the udders.
- Dip teat cups, preferably using a pasteurizing pail.
- Dip teats after milking, to seal off teat canal from infection.

Tests were continued on all herds at 6-week intervals, for five tests. Then the sixth and seventh tests were carried out at 3-month intervals.

The program represents a new and successful approach to mastitis

control. It might represent an answer at last to the most costly disease affecting the dairy farmer.—P.L. V

Ontario to Have Mastitis Program

A PROVINCE-WIDE program to control mastitis in the dairy herds of Ontario will be launched this summer.

Although milk consumed by the public is not affected by the disease, mastitis is estimated to cost dairy

farmers in that province about \$10,000,000 a year in lost production, according to Ontario Minister of Agriculture W. A. Stewart.

"Although pasteurization, as universally practiced, kills all known mastitis virus, the problem has plagued farmers for more than 150 years," he said.

Mr. Stewart said results of a pilot program conducted at the Department of Agriculture's experimental station at Ridgetown, involving 150 dairy herds, revealed that mastitis can be successfully controlled.

"This program will eventually be extended to all parts of Ontario as soon as laboratory services can be arranged."

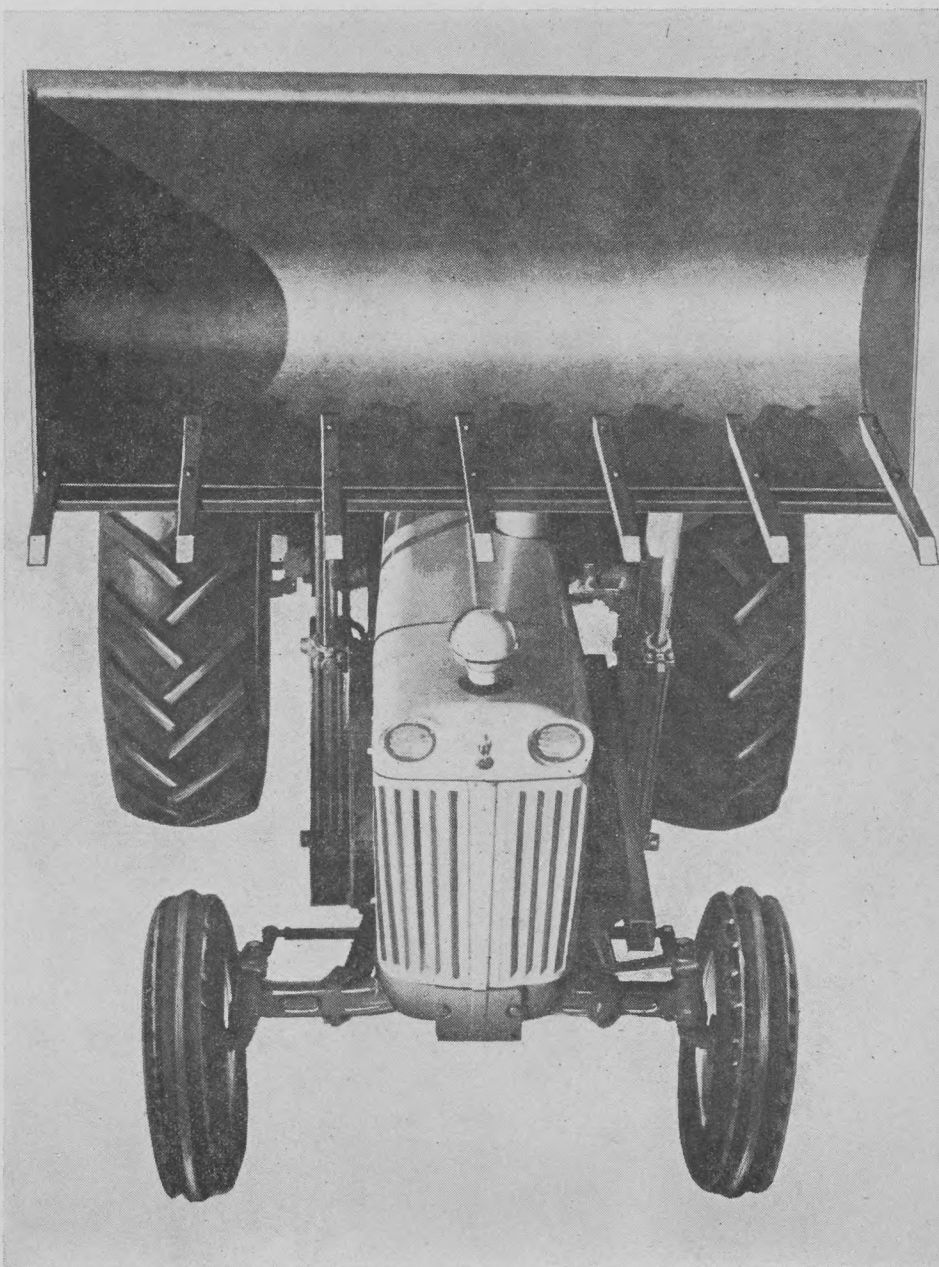
Dairy farmers may enroll their herds in a Mastitis Control Plan, and following a period of testing and treatment, obtain a mastitis-free certificate issued by the Ontario Department of Agriculture.

Mr. Stewart said an extensive education program as well as continuing research will be necessary to achieve success in controlling the disease.

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You work faster and better with a Robin than with other front end loaders, because it gives you *more* to work with! The extra width of Robin's big, businesslike bucket gets *close in* to corral fences, barn walls and all obstruc-

tions. Even with a wide front tractor, the wheels won't get in the way of the work. You dig in, tear-up and load tough, compacted material in double-quick time, with fewer trips. Hook-up your tractor to a Robin, and see!



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A full 60" for 4-5 plow tractors, 48" for 2-3 plow. Ask your dealer about easy hook-up to *your* tractor.

● Full Hydraulic Brawn!

Hydraulic bucket control, as well as lift control, is *standard* on a Robin for faster loading and dumping.

● Digs deep!

The only front end farm loader with up to 7" digging penetration below ground level.

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Fast, easy frame removal for field work! Fast, easy bucket removal to fit optional attachments: Angle Dozer & Push-Off Stacker (for 4-5 plow tractors).

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Heavy-duty box-beam steel construction for long life, with balanced design for easy handling. Like a rugged industrial loader!

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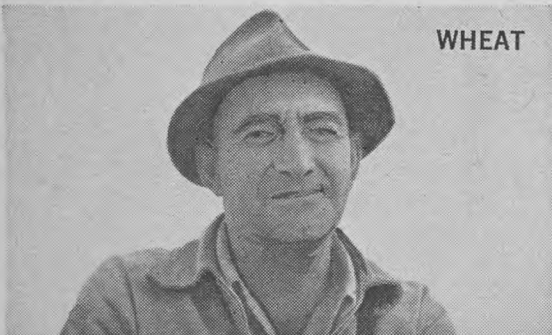
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HERE'S WHAT CARBYNE USERS SAY

Since Carbyne was introduced three years ago, farmers have proven its effectiveness on more than one million acres of crops. Read how Carbyne helped these users get cleaner fields and bigger yields:



WHEAT

"I got at least a ten-bushel-per-acre increase by using Carbyne to control wild oats in my wheat. The results were excellent. It makes the crop a lot easier to handle at harvest time. I wouldn't be without Carbyne for wild oat control in my wheat and barley."

Ed Trautman, Barrhead, Alberta



BARLEY AND
WHEAT

"By using Carbyne to control wild oats, it allows me to grow good stubble crops. I can seed barley and wheat earlier, then use Carbyne to kill wild oats if they appear. I've been able to get good results by spraying only the heavily infested areas."

Eugene Kalinchuk, Bowsman, Manitoba



WHEAT

"I've used Carbyne for four years on wheat. Control has been excellent—about 85 per cent—and yields have been increased by as much as 15 to 20 bushels an acre in the low areas. We can really grow crops in the sloughs when we control wild oats with Carbyne!"

Stan Brooks, Belle Plaine, Saskatchewan



RAPESEED AND
WHEAT

"I've used Carbyne on rapeseed and wheat for four years and had fine results each time. I've had as high as 14 bushels increase in wheat yields. Using Carbyne to control wild oats permits me to seed rapeseed on stubble, and therefore grow an extra crop. Carbyne definitely pays!"

Jack Ballentine, Irma, Alberta



Results are easy to see when you spray Carbyne to kill wild oats. In this barley field, wild oats are thick in the unsprayed "skip" at left. The Carbyne-treated grain is clean!

Carbyne kills wild oats for cleaner fields and bigger yields

An average wild oat infestation cuts your wheat or barley yields by at least 6 bushels an acre. It's almost certain that you will be faced with this costly weed problem in at least part of your cropland this Spring.

The modern answer is Carbyne. A single spraying of farm-proven Carbyne at the right time kills wild oats where they are growing in your crops. Applied according to label instructions, Carbyne will provide the most efficient wild oat control yet devised.

Because Carbyne kills wild oats *after* you see them, spraying can be limited to only the infested parts of your crops. No need to waste time and money on the uninfested areas.

Protects Crop Profits

With Carbyne in your plans, there is no reason to delay seeding to plow under that first flush of wild oats. You can plant just as soon as soil and weather conditions permit. That does away with late maturity risks and the extra growing time adds bonus yields.

Spraying Carbyne to kill wild oats pays several other ways, too. Your crops have less competition for moisture, fertilizer and natural soil nutrients. Row crop cultivation is easier. Future wild oat infestation is reduced.

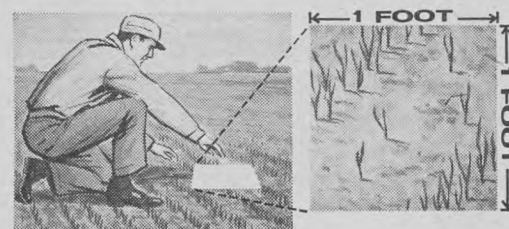
9 Approved Crops

Over the past three years, farmers have used Carbyne to kill wild oats on more than one million acres of crops. It is approved and recommended for use in Spring wheat, durum wheat, barley, sugar beets, flax, peas, mustard, rape and sunflower.

Carbyne is mixed with water and sprayed directly on the growing crop during the 2-leaf stage of the wild oats—as explained in detail on the label.

Know When to Spray

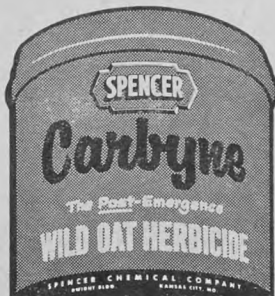
One spraying at the right time does the job. Just follow the label instructions carefully. That's important. So, don't be trapped into a last minute rush. Right now is the best time to get acquainted with Carbyne. The fact-filled 1964 Carbyne wild oat control folder (shown below) is available at nearby farm chemical dealers now. Pick up your free copy this week.



How to spot a wild oat problem in time to do something about it:

Unless you know just what to look for, it is easy to underestimate the threat of wild oats in a young crop. During the first five to ten days after seeding, it is difficult to spot even a heavy infestation from the road. Yet, this is the most critical time. Close inspection by walking the fields is the only answer.

As few as four wild oat plants per square foot (as shown right above) can cause serious yield losses. When your fields look like this, you'll be money ahead to spray Carbyne as directed on the can label.



FREE fact-filled 1964 Carbyne folders in full color are now available from

CHIPMAN CHEMICALS, LIMITED and
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Carbyne is a registered trademark of Spencer Chemical Company, Kansas City, Missouri

Guide report on . . .

Chemical Weed Control

- ✓ New herbicides for 1964
- ✓ Better ways to use the old ones

Edited by JIM BARNETT

ONE new chemical was added to the growing list of herbicides recommended for use in cereal crops in the west this year. It is Banvel D, which now goes under the name of Dicamba. So far it is only being recommended for use in wheat and oats.

After 3 years of testing the new chemical has proven highly effective in controlling wild buckwheat, tartary buckwheat, green smartweed, lady's thumb, cow cockle, hedge bindweed, corn spurry, Russian thistle and Canada thistle, top growth only, along with other hard-to-kill weeds.

This year it is being offered to farmers as a preparation, incorporating 2,4-D amine and MCPA, under the trade name of Kil-Mor.

According to John Howden, weeds specialist with the Manitoba Depart-

ment of Agriculture, the new chemical gives close to 100 per cent control of the above weeds when applied at 2 to 4 ounces of acid per acre.

While discussing the new chemical Howden was emphatic on one point, however. *There is going to be visible crop damage within a week of application.*

"The treated crop will be shorter by about 2 to 3 inches than untreated crops, and there will probably be some thinning of the crop after spraying," he said. Despite this immediate effect, there is complete crop recovery and yields are definitely increased as a result of spraying, says Howden.

He suggests that farmers who are skeptical of the new chemical so far as crop damage is concerned, should try some on a limited area this year and see the results for themselves. "Any damage sustained by the crop will be more than offset by increased returns from weed control."

Wheat and oats are sufficiently resistant to tolerate up to 2 ounces without yield reduction. Barley, for which the chemical is not recommended yet, is more sensitive and tests have shown that 1 ounce appears to be the maximum dosage which won't adversely affect this

Angle Dalrymple of Lincoln County, Ont., shows how chemicals controlled weeds in his corn field last year. Bare ground on left was sprayed while grasses at right thrived on untreated ground.

[Guide photo]

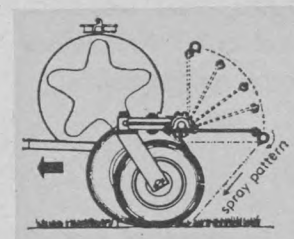


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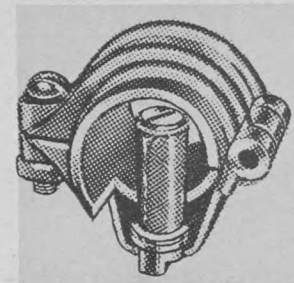
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The tandem axle provides even load distribution, minimum soil compaction and smoother ride for both tank and trailer.

At 5 mph, this unit sprays 35 acres per hour. Tank of chemical covers approx. 128 acres.



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Write for free literature illustrating field sprayers (wide range of sizes available), row crop sprayers and power sprayers

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SOILS AND CROPS

crop. Best results are obtained when the crop is in the 3- to 4-leaf stage.

Dicamba is less effective than 2,4-D and MCPA on some of the common weeds such as the mustards, shepherd's purse and cocklebur. Because of this lack of control of the common spectrum it is offered for sale combined with 2,4-D and MCPA.

Says Howden, "There will be a great temptation for farmers to do their own mixing of Dicamba and 2,4-D and MCPA. Knowing what we know of the compatibility of various

herbicides this may or may not turn out right. The safest course of action is to stick with the prepared mixture."

Another new chemical Tordon which has the same general uses as Kil-Mor is still undergoing tests and has not yet been released for general distribution. This will be a new herbicide to watch for in the future.

Howden sums up weed control aids developed for farm use so far with this comment: "These new chemicals look more promising and considerably more efficient. But

ounce for ounce, the ones we have been using over the years—2,4-D and MCPA— if used as recommended, will still handle 90 to 95 per cent of our existing weed problems. This still doesn't overrule the value of good cultural control in the first place."

WILD OATS

Included in the new Manitoba recommendations is Avadex BW for wild oat control in wheat. Avadex BW closely resembles Avadex in method of application but is less injurious to wheat and barley. Recommendations state it should be applied after the wheat is seeded and incorporated into the soil to a depth of not more than 2 inches, using a single or double harrowing.

Recommendations for use of Avadex and Carbyne remain unchanged from last year.

Treated with Avadex BW at $1\frac{1}{4}$ to $1\frac{1}{2}$ quarts per acre after seeding, barley yielded roughly 17 more bushels to the acre than the untreated "check areas." Similar experiments conducted at the Regina Experimental Farm confirm these results.

CORN

Weed control with chemicals in the eastern corn crop last year was a disappointment on many farms. But in the view of Prof. George Jones of the OAC, it wasn't as bad as it seemed. "In fact," says Jones, "Atrazine gave good weed control in 1963. The only trouble was, it wasn't perfect. It is quite possible to control 95 per cent of a weed population and still have serious weed problems in corn."

According to Jones there is no going back to mechanical weed control. Most years you can't rely on it. You've got to use chemicals. And in his view Atrazine is the best herbicide for corn. This chemical does the best all-round job if it is applied as an early post-emergence over-all spray because there is a two-fold action: namely, leaf up-take and root up-take. Through 1959 to 1962, this method of applying Atrazine gave excellent results. In 1963 the dry conditions reduced the root up-take effect and while foliar results were good, the complete weed control of previous years was often lacking.

WEED SHIFT TO GRASSES

Under normal conditions, it is true that over the past few years grasses have become more and more abundant in cash crops rotations. According to Mr. R. Frank of the Western Ontario Experimental Farm, Ridgetown, this has been brought about by a shift in weed populations from broad leaf weeds to grasses. With the continued use of 2,4-D, many broad leaf weeds have been reduced or eliminated in corn and cereals. However the grassy weeds are still there. They have become predominant. Atrazine is the first major grass killing herbicide to be used to halt this change. Today the perennials—quack grass and nut grass or nut-sedge present major problems in row crop systems. Even where good cultural practices are followed they take an 8 to 10 per cent toll of crop yields, and add to the cost

of harvesting either through a delay in harvest or through breakage of equipment. Until grasses are controlled or eliminated, they are going to be a continual drain on farm income.

Prof. Jones says the weeds that escaped Atrazine were mainly the annual grasses (barnyard grass, foxtails, old witchgrass, crabgrass). He says that barnyard grass and foxtails have a greater tolerance to Atrazine and they will germinate at a greater depth in the soil. This helps them escape the treatment. As for crab grass and witch grass, late germination and their tolerance for Atrazine helps them escape.

MAKE ATRAZINE WORK

According to Jones there are two things to keep in mind in making Atrazine work in a dry year. First, raise the spraying pressure. Then spray a second time in case of failure to get complete control with the first.

Here's how to do it. Use $2\frac{1}{2}$ to 3 lb. of Atrazine (50W) at 60 to 90 lb. per square inch pressure, as an early post-emergence spray before the weeds are $1\frac{1}{2}$ inches high. If there are still weeds around 3 weeks later use 1 lb. of Atrazine (50W) with the same pressure and water volume.

Jones says the first application will usually give control. It will take judgment to decide whether to use a second spray or not. You must decide how many weed escapes justify the treatment; and when is a weed dying and when is it escaping? The best advice is to be patient. If weeds are living about 3 weeks after the first spray and particularly if these weeds are grasses and the weather is dry, chances are they will continue to live and become a problem. How many should be there before you should consider treatment? Jones recommends this guide: one weed or more per square foot reduces yields by 25 per cent or more; one weed per 3 square feet reduces yields by 5 per cent. It means that you can't really afford to own any weeds at all.

A PLACE FOR 2,4-D

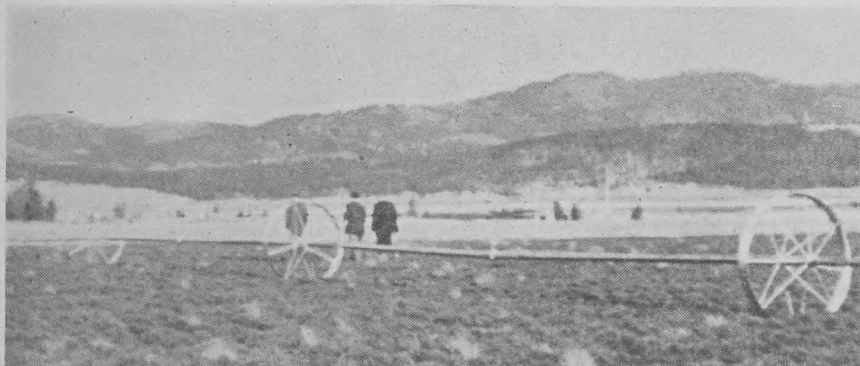
Many people have taken to using 8 ounces of 2,4-D amine with the first Atrazine spray to get better control of thistles, sow thistle, curled dock and field bind weed. Prof. Jones says this is good, but watch out for the high pressure and 2,4-D drift. If this mixture is used, he advises staying at 40 lb. per square inch pressure or below.

In general, Jones says it is safe to sow oats, barley, spring wheat or soybeans after a 4 lb. (50W) application the year before. Sugar beets should not be sown at all after corn treated with Atrazine.

Linuron is being recommended for the first time in 1964. It is not as good a herbicide as Atrazine. It can cause slight injury and is not as powerful. But it will reduce residue hazard and its potential for a directed-between-the-rows spray may be very good indeed, says Jones.

R. Frank of Ridgetown says Dalapon has given effective annual control of quack grass but has not been consistent in reducing it permanently over a wide range of soil

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and climatic conditions. When applied in the spring to quack grass, the field can be plowed down about 4 days later. From plow-down to corn planting time, there must be another delay of at least 4 weeks and since corn should be planted early—say by May 10 in south-western Ontario, any delay can be costly. As a result Dalapon should only be used for early season control.

Amino Triazole and **Amitrole-T** have also given fair control of quack grass when they are accompanied by the proper plowing and cultural practices.

Atrazine, when properly applied, has consistently reduced quack stands.

Frank notes that Atrazine has been used successfully to control nut grass and that **Eptam** is also showing great promise.

For soybeans, **Randox** has given good grass control in growers' fields; but Frank reports that **Amiben** has been the most successful herbicide for soybeans on his fields at Ridgetown. For field beans, **Randox** and **Eptam** are the chemicals to use. On test he said adequate weed control almost doubled yields. In one plot where crabgrass was allowed to grow uncontrolled in the rows, yields were 14.2 bushels per acre. However where beans were treated with a grass killing herbicide and cultivated, they yielded 26.8 bushels per acre.

SUGAR BEETS

For sugar beets **TCA** applied pre-emergence on a band over the row has given consistent grass control and is now widely used by growers. The use of **Dalapon** is a post-emergence treatment to be used once the beets and grasses are up. It has given good grass control but it can cause beet injury.

PASTURE MANAGEMENT

Herbicides have also a big role to play in pasture management. For instance, there are 4 million or more acres of rough pasture in Ontario where cultivation is undesirable or impossible because of slope, shallow soil, rocks, stones or stumps. If the stands consist of mostly grasses, herbicides can be particularly useful on them. Re-seeding and fertilization may be useful on them as well.

Ontario farmers can get the complete story of weed control with up-to-date recommendations by asking their agricultural representatives for publication No. 75.

Here are some of the important points to follow in the successful use of herbicides:

1. Pick the right day for the spray job. The weather should be warm, 70-75 degrees F., growing conditions good, and there should be little wind.
2. Spray when weeds are small as they are more susceptible at this stage.
3. Use the proper chemical and formulation. Where there is danger from drift damage, use the non-volatile formulations.
4. Use herbicides safely. Spray at low pressures, 30 p.s.i., to produce

droplets that have little tendency to drift.

5. Identify your weeds, as weeds vary considerably in their susceptibility to herbicides.

6. Read the label and follow instructions. V.

Try Sowing Grasses Alternately

A SHARP increase in hay yields—especially in dry seasons—can be obtained by seeding alfalfa and grass in separate rows rather than in a mixture.

In tests under dryland conditions at the federal experimental farm at Swift Current, Sask., alfalfa and grass seeded in alternate rows 12 inches apart gave hay yields averaging 20 per cent more than those obtained when they were seeded as a mixture in similarly spaced rows.

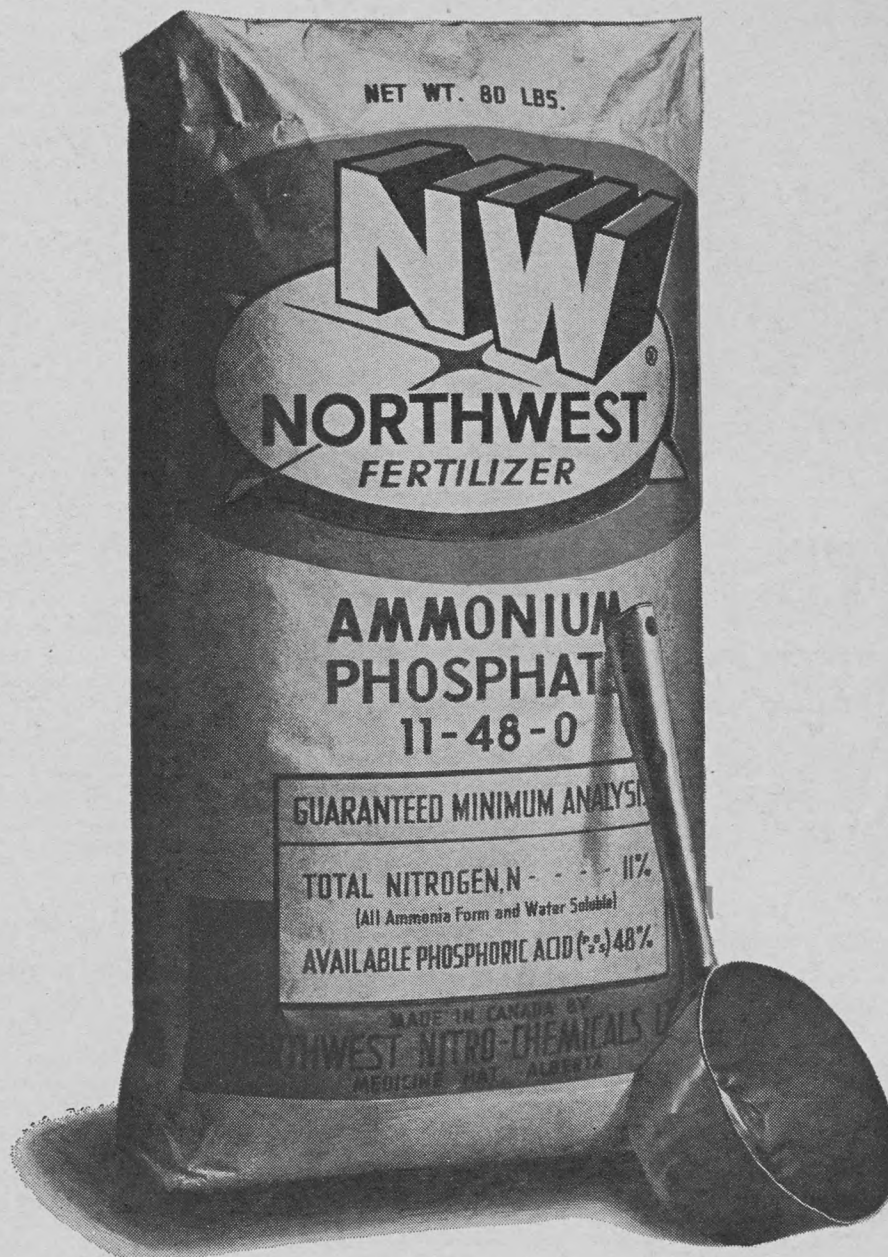
Yields varied according to the season, reports M. R. Kilcher, of the Swift Current farm. In the better growing seasons, the alternate row stands yielded only 5 per cent more; in seasons of more normal moisture conditions the yield was 30 per cent greater.

The most startling results were

obtained in dry years, when the alternate row method produced yields 135 per cent greater than those from mixed seeding.

The higher yields from alternate row seeding are due to the better use made of moisture reserves by the crop, particularly by alfalfa, explains Kilcher.

Because of its faster growth in early spring, grass tends to suppress alfalfa when they are grown in the same row. In dry seasons, the competition is hard on alfalfa and it tends to starve out quicker during a succession of dry years than when grown alone. V.



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SOILS AND CROPS

Low Seeding Rates, Good Seed Pay

ASK farmer and seed grower Bert Mitchell if it pays to use good seed and you'll get a quick answer.

"Good seed is the cheapest kind," he'll tell you. "Ordinary seed doesn't pay the costs of cleaning it. I'll do it here at my plant but it doesn't pay a farmer to have it done. Here is why: Good seed has high germination. It gives you fewer weed problems and also less disease problems. Sow good wheat or barley like I do at the rate of 1 bushel to the acre, and the cost is only \$1.45. But do like many people do—buy good feed grain and use it for seed and here is what happens. You pay 75¢ per bushel for it in the first place. You'll have to clean it heavily. Since it won't likely have high germination, you'll have to seed it heavier too—say 2 bushels to the acre. By the time you have cleaned out 50¢ worth of it and seeded a dollar and a half's worth of it, you've got \$2 invested in seed. It would have been cheaper to buy good seed at \$1.45 in the first place."

Mitchell, who farms 3 quarter-sections of land near Rosburn, Man., discovered the value of good seed nearly 30 years ago. In 1936, he paid \$70 for 6 bushels of Thatcher wheat he seeded less than 1 bushel to the acre and got a crop of 45 bushels to the acre. He's been using good seed ever since.

He is in the seed business too and grows registered seed himself. Last year, he grew 80 acres of Parkland barley, 75 acres of Rodney oats, and 15 acres of Ajax oats. He calls his place Sunny Acres Seed Farm and

handles both registered and certified seed from it.

Quality seed is important to him. "If my seed doesn't germinate 95 per cent out of the combine, I won't bother cleaning it," he says. "If



[Man. Dept. of Agric. photo]
Bert Mitchell's son John who is also seed grower with Melvin Luhowy (r.).

there is over 1 per cent smut I won't clean it either. Our barley is usually smut free."

Seed drill surveys point up the fact that plenty of farmers are missing the boat when it comes to using quality seed. The surveys indicate that up to 50 per cent of the seed planted each year grades rejected, because of weed seed content. According to the Canadian Seed Growers Association, certified seed is the best grade the farmer can buy for the improvement of his commercial crops. It is guaranteed true to variety, high in germination, with a high degree of freedom from weed seeds and disease. V

Canners May Go for "Deformed" Peas

A GENETICALLY determined "deformity" of peas may help produce varieties more suitable for modern pea growing operations, according to University of Wisconsin research.

D. J. Hagedorn, who is in charge of the university's pea breeding program, is working with lines of *fasciated* peas. Many of these lines have two attractive characteristics—the pods are bunched at the top of the plant, and the peas mature more uniformly. The latter is their biggest appeal.

With present varieties, canners have to compromise on yield and quality. At harvest time, some peas are too mature while others are not mature enough. That's because ordinary plants set peas along the stem of the plant, and the lower ones get an earlier start than the upper ones. Sometimes you can see swelling pods and flowers on the same plant, Hagedorn says. By the time the flowers have produced mature peas, the peas in the lower pods are well past the best harvesting stage.

With fasciated lines, the peas are set more closely together and they all get off to a more even start; thus

they reach the best canning stage at nearly the same time.

Since the pods are on the top of the plant, it might be possible to harvest only the tops. This would mean less vine to be threshed and also more plant residue on the field to plow under and increase organic matter of the soil.

Pea growers and plant scientists have seen these fasciated peas for many years, Hagedorn says. But many people consider fasciation to be an unregulated sort of a thing.

Genetic studies by Hagedorn and others have definitely established that this is an inherited characteristic, and lines can be selected for various degrees of fasciation in breeding programs. V

Pubescent Wheatgrass Good Dryland Forage

GREATER use of a fairly new grass called Pubescent wheatgrass is being encouraged by the Alberta Department of Agriculture. It produces an abundance of forage which is relished by livestock.

O. G. Bratvold, supervisor of the Crop Improvement Service, reports that early spring growth is one of the features of Pubescent wheatgrass. (Please turn to page 50)

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SOILS AND CROPS

grass. It thrives where moisture is plentiful and also does extremely well under drought conditions. In fact, it has been one of the best hay producers in the dry areas of southeastern Alberta.

The Department of Agriculture has been testing Pubescent wheatgrass for about 3 years to determine its winter hardiness in the more northerly areas of the province. Results of these limited tests indicate good winter survival, according to Mr. Bratvold. To date, however, no tests have been conducted in the Peace River area.

Pubescent wheatgrass is quite easily established because it has a large seed and good seedling vigor. Its running root stock is mildly sod forming. Because of these qualities of good spring vigor, ease of establishment, drought tolerance and palatability the department feels that Pubescent wheatgrass should be more widely used throughout the central and southern parts of the province. V

Didn't Pay to Fertilize Native Pasture

FARMERS intent on improving native pastures with fertilizer will be discouraged by the results of a 6-year study carried out at CDA's Experimental Farm at Brandon, Man.

According to researcher A. T. H. Gross, native upland grasses respond well to chemical fertilizer but the increased yield is not enough to cover the cost of the fertilizer.

This was true even when yields were increased as much as 48 per cent, added Mr. Gross.

A native pasture giving 850 lb. of hay per acre received 60 lb. of nitrogen per acre which increased yield to 1,100 lb. Phosphate fertilizer gave little yield response except when combined with nitrogen fertilizer.

Best hay yields—up to 1,250 lb. per acre—came from combining 60 lb. each of nitrogen and phosphate fertilizer.

Assuming that hay cost \$20 a ton, the unfertilized pasture was worth \$8.50 an acre, the nitrogen-fertilized pasture was worth \$11 per acre, and the combined nitrogen-phosphate fertilized pasture was worth \$12.50 per acre.

As it cost \$6.66 to fertilize the pasture with nitrogen and \$11.58 to fertilize it with nitrogen and phosphate, the costs were greater than the value of the increased hay production, he said. V

Cultivation Important to Weed Control

CULTURAL practices for weed control remain as important as ever in crop land management despite the general acceptance of herbicides.

Crop rotations, summerfallowing, good seedbed preparation, and the method and time of seeding various crops, all benefit the crops as well as deter weed growth.

Time of seeding affects crop and weed development differently, depending on crops, weeds and seasons; but, generally, seeding should be delayed beyond the earliest possible date. This benefits crops because more weeds have germinated and more are therefore destroyed by pre-seeding tillage; and secondly, conditions are better for early growth of the crop which helps it compete with the remaining weeds. V

Watch for Spray-Drift on Sensitive Crops

B E careful when spraying your crops with selective herbicides this season. Every year cases of crop, tree and garden damage are reported which could have been avoided with a little care on the part of the spray operator.

W. Lobay, Alberta's supervisor of Soils and Weed Control, points out that although selective herbicides are non-poisonous, non-flammable and non-corrosive, their drift can cause damage to crops if they are carelessly applied. Because of their wide safety range, spray operators are inclined to get careless and often lay the blame for subsequent damage on the herbicide rather than themselves.

Here are some facts outlined by Mr. Lobay which every farmer and spray operator should always keep in mind when spraying for weed control.

The greatest returns from an investment in herbicides are obtained when the weeds are sprayed in the young stage of growth (2 - 4 leaf stage) and actively growing.

Selective herbicides including 2,4-D and MCPA should never be applied on a windy day because the mist or vapor fumes can be carried to nearby fields and gardens. Evening and morning spraying is recommended because the wind velocity is generally low and the humidity high during these periods. The morning is usually the most ideal time.

The toxicity of weed killing chemicals varies greatly. The ester formulations give off fumes for some time after the application. While this may be a good thing where there are no sensitive crops nearby, it may be dangerous if susceptible varieties are in adjacent fields.

Amine and salt formulations are non-volatile. For this reason it may be safer to use them rather than esters in the vicinity of sensitive crops.

Rapeseed, sunflowers, sugar beets, legumes, vegetables and many ornamental trees and shrubs are very sensitive to 2,4-D and allied chemicals. Spray operators should watch for these when applying selective herbicides.

Sprayers contaminated with 2,4-D should not be used to apply insecticides or other solutions to sensitive crops. Even trace amounts of 2,4-D and related compounds can damage certain broad-leaved crops. The sprayer should always be thoroughly cleaned with a household ammonia solution before being used for any other chemical.

(Please turn to page 52)



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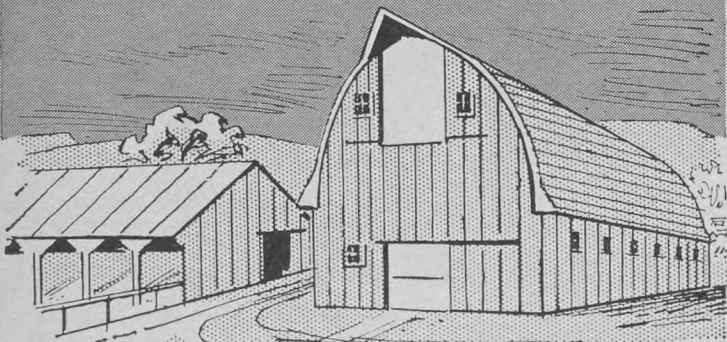


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SOILS AND CROPS

(Continued from page 50)

Every spray operator must be familiar with the chemical he is using. He should read the label directions carefully, paying particular attention to warnings and cautions.

Mr. Lobay strongly recommends chemical control for the elimination of weeds and increased crop yields. He urges farmers to avoid unnecessary damage to sensitive crop. V

Late April Best Time to Sow Beets

STUDIES on the effects of seeding date on sugar beet yield and quality over the past 30 years at the Lethbridge Research Station, Alberta, have led to the following observations:

- There is generally no difference in yield or quality of sugar beets when seeded between April 15 and May 10.

- Seeding in April prior to April 15 produces good yields if the weather remains favorable. One can expect to reseed about 50 per cent of the time when seeding is done early in April.

- Seeding after May 10 results in yield reductions of approximately 2 tons per week of delay up to July 1.

- Seeding after June 15 returns less than 10 tons per acre.

- Fertilizer applied when seeding before May 1 increases yields by 2 to 3 tons per acre as compared with increases of 1 to 2 tons for May seedings and 0 to 1 ton for seeding in June.

- Seeding prior to May 10 increases yields more than early harvesting reduces yields.

- There is no decrease in the percentage sucrose content at harvest when seeding is done prior to May 20. Seeding after May 20 reduces the percentage sucrose by about 1 per cent per week of delay.

- Regardless of seeding date, the percentage sucrose at mid-September is about 3 per cent less than at mid-October.

- Application of 100 pounds of 11-48-0 per acre has no effect on percentage sucrose.

- Transplanting sugar beet seedlings may increase yields 3 to 10 tons per acre if done during the first 2 weeks of May.

To receive the most profitable return from land, fertilizer, and time, a seeding date in the last week of April is recommended. If conditions are not favorable at this time, there is still sufficient time to seed before yields are seriously affected. If re-seeding is necessary, it is profitable up to about June 10. V

Seed Better Cleaned at Home

ONE of the surest ways a grain farmer can add to his weed problem is to take his seed to a country elevator for cleaning, say weeds specialists with the Manitoba Department of Agriculture and Conservation.

Surveys carried out by department specialists show that not only

are cleaning facilities at country elevators inadequate, but farmers also risk introducing new weeds to their land. Seed barley samples cleaned at country elevators had a reduced total weed seed content but wild oats were increased and seeds of Canada thistle, false wild oats, barnyard grass, lamb's quarters and wild buckwheat were added.

In oats, sow thistle, Canada thistle, barnyard grass, prairie sunflower and pigweed seeds were added. "Cleaned" wheat seed had additional seeds of couch grass, wild oats, tame oats and flax.

According to weeds specialist, John Howden, one of the greatest problems in weed control faced by a farmer is the introduction of foreign weeds. "He may have an adequate control procedure for weeds already established on his land, but when new weeds are added he must often change his procedures. Before he can devise a practical new method the added weeds scourge may be established and cut crop yields."

Mr. Howden urges farmers to either clean their seed at home, or at a seed cleaning plant, or sow only certified seed.

At home, a fanning mill alone is sufficient equipment. No foreign weeds are added and the mill does an adequate job of reducing the weed seed count.

Seed cleaning plants must maintain high cleaning standards, and are designed to prevent contamination of the cleaned grain with seeds from other farms. V

Fertilize Properly for Best Results


TO get the most out of fertilizer, farmers should apply it in the right way, say soils specialists.

Cereal crops take up fertilizer nutrient during the first 6 to 8 weeks of growth so it must be readily accessible at this early stage. Care must also be taken with nitrogen to avoid plant injury when too much is applied with the seed. When the crop needs over 25 lb. of nitrogen per acre farmers should consider broadcasting the excess amount.

It is most important that the required phosphorus is drilled in with the seed. Phosphorus is an important nutrient needed by summer-fallow crops so must be used efficiently, the specialists say. Soil tends to "fix" the phosphorus in fertilizer and make it unavailable to the plants. If the phosphate fertilizer is drilled in with the seed in every case there is a minimum of loss by "fixation" and the phosphates are near the roots where they are taken up.

Cereal crops grown on stubble require 15 to 40 lb. of nitrogen along with 10 to 30 lb. of phosphates. If not more than 25 lb. of nitrogen is required by any individual stubble field the full nutrient requirement can be drilled in with the seed by using 27-14-0, 16-20-0, 24-20-0 or 23-23-0.

It is possible to apply the complete nitrogen requirement by broadcasting, but crop response is not as good as when the nitrogen is drilled in. V

An aerial, black-and-white photograph of a vast, flat agricultural field. The field is marked with numerous parallel, slightly curved tracks, likely from a combine harvester, running diagonally from the top right towards the bottom left. In the upper right corner, a small, dark silhouette of a combine harvester is visible, working in the field. The overall texture of the field is grainy and uneven, typical of a harvested crop field.

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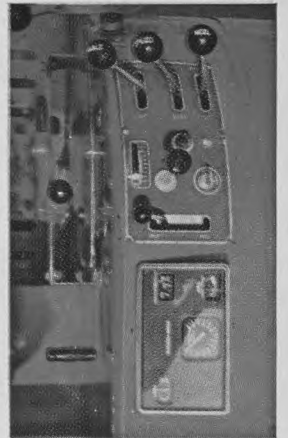
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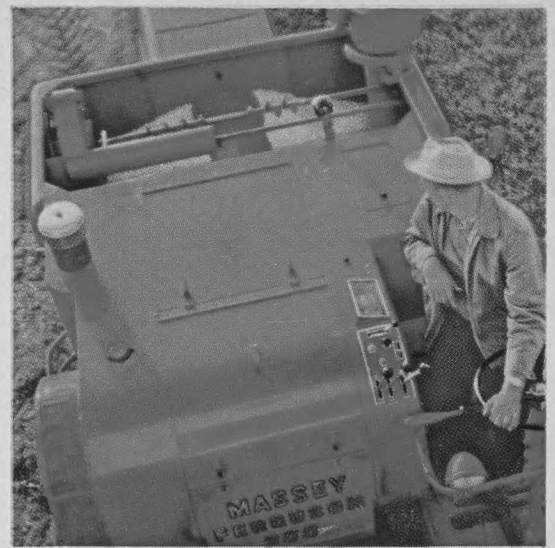


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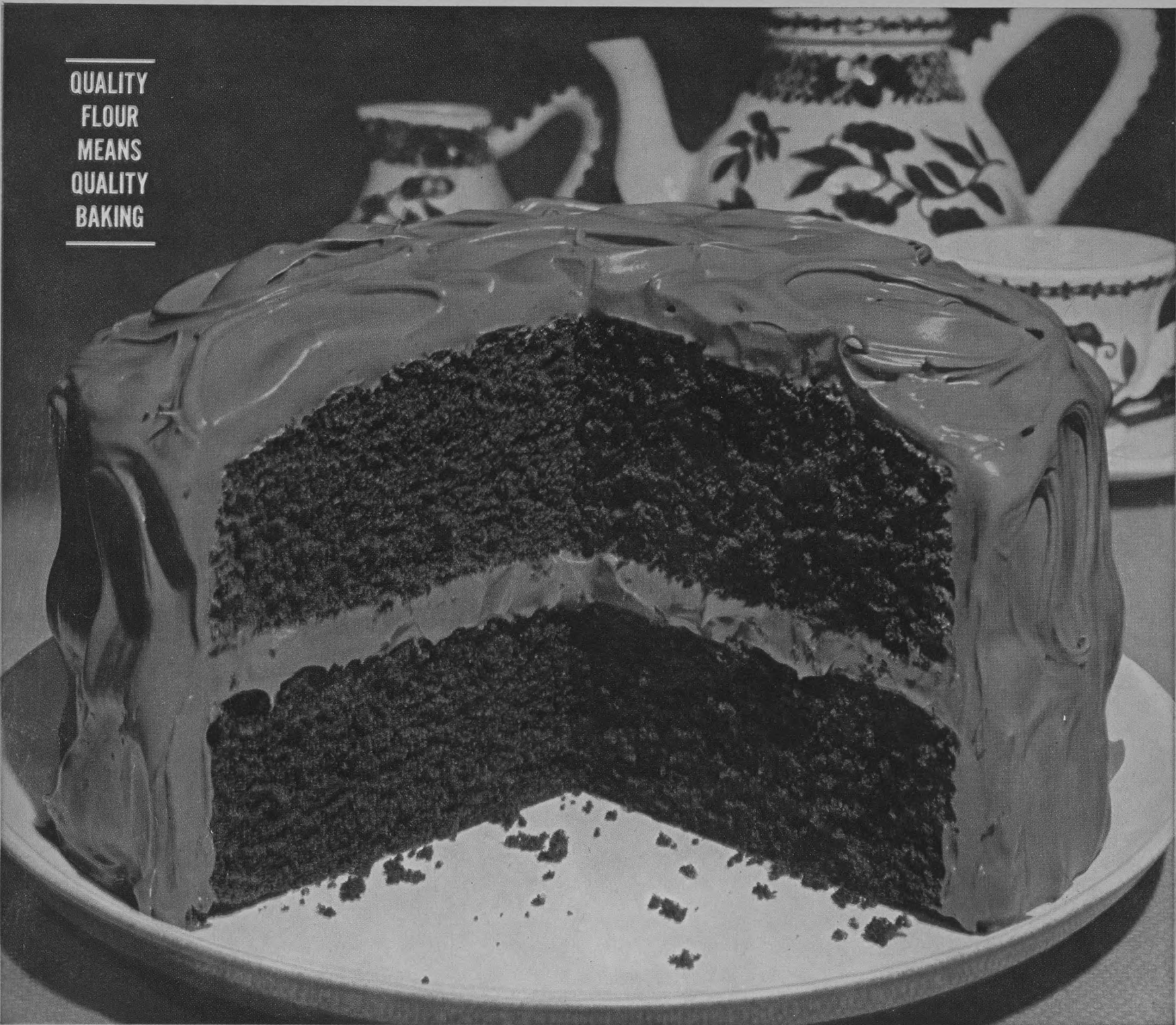


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Robin Hood's "Tested Favourite" Chocolate Cake Recipe

$1\frac{1}{3}$ cups Robin Hood All-Purpose Flour	1 cup sugar
1 tsp. baking powder	$\frac{1}{2}$ tsp. vanilla
1 tsp. baking soda	2 eggs
$\frac{1}{2}$ tsp. salt	2 squares (2 oz.) unsweetened melted chocolate
$\frac{1}{2}$ cup soft shortening (part butter)	1 cup milk

Preheat oven to 350°F. **Grease** and lightly flour two 8" layer pans. **Measure** flour, baking powder, soda, salt on waxed paper; blend well. **Cream** shortening till fluffy; gradually add sugar, mixing till creamy; add vanilla. **Add** eggs singularly, beating well after each. **Blend** in chocolate. **Add** dry ingredients alternately with milk blending well after each addition (begin and end with dry ingredients). **Turn** batter evenly into pans. **Bake** 50 min. at 350°F; remove, let stand 5 min., turn out on rack to cool. **Frost** as desired.



Robin Hood All-Purpose flour never varies in quality or performance. Wherever you buy it, whenever you buy it, Robin Hood flour is always the same.

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Because of poor drainage or shallow stony soil, many thousands of acres in Ontario should never have been brought under cultivation. Under ARDA, some marginal lands will be reforested or turned into game and wildfowl preserves. The pressing need in some areas is for creating good community pastures.

Greener Pastures with ARDA?

Ontario's program is underway. Its success will depend on how much use county groups make of it

SEVERAL community pasture projects are on the way for Ontario under the provisions of ARDA.

In Victoria County, where many farms are too small to produce year round feed requirements, a 1,500-acre tract will be used this year for pasturing 500-head of cattle. The aim is to have better than average pastures of sufficient size so that a good stockman can be hired to care for the cattle. A good manager capable of handling foot rot, pinkeye and bloat problems is necessary if the projects are to succeed. "We are not selling the idea of community pastures," says Herb Crown, Ontario's director for ARDA. "We provide the facts and encourage local organizations to decide on the merits of each case."

Timiskaming, in northern Ontario,

will probably be the second project to get into operation and it will be followed by areas in Bruce and Leeds Counties.

Undoubtedly, there are many other areas in the province where a great deal of pasture land could be improved and its carrying capacity increased, by use of practices like weed control, fertilization, reseeding and fencing in economic units. Beef and dairy farmers could benefit by pasturing dry stock on this land, if it were turned into community pastures.

Just how much will be achieved under the community pasture program depends on the enthusiasm and action at the county level. Says Herb Crown, "ARDA can be helpful only to the extent that rural people use the technical and financial assistance."—P.L.

Cow Cockle Control Being Studied

SOME means of controlling cow cockle, which appears to be gaining in prevalence, were investigated at the Experimental Farm, Swift Current, in 1963.

A field, infested artificially with a dense population of the weed, was seeded to both wheat and flax. First seeding of both crops was done on the standard date for the area, May 10. This part of the trial was later sprayed with seven different herbicide materials, all still in the experimental stage.

For comparison, the remaining part of the trial field was seeded to both crops on June 12, the delay being more extended than originally planned because of weather conditions. By this time more weeds had emerged and could be destroyed by pre-seeding tillage consisting, in this study, of cultivating with the heavy duty cultivator and rodweeder attachment. This part of the trial was bulk-sprayed with 2,4-D only.

The results of the study, under the seasonal conditions of 1963, indicate the following: yields of wheat from the chemically treated plots seeded on the standard date ranged

from 15 to 21 bushels, and flax from 5 to 11 bushels per acre. The same crops seeded on June 12 yielded 24 bushels of wheat and 22 bushels of flax per acre. The surviving cow cockle on chemical treatments ranged from 1 to 4 plants per square yard producing 1 to 17 lb. of dry matter per acre in wheat, and 1 to 12 plants and 44 to 373 lb. in flax.

The corresponding quantities from delayed seeding were below 1 cow cockle plant per square yard in both wheat and flax, and dry matter weight of 2 lb. in wheat and 33 lb. in flax.

The effects of herbicide materials used in this trial show promise and merit further testing. The study also pointed up the important role of cultural treatments such as delayed seeding in weed control, even with the use of herbicides. Both methods should supplement, not replace, each other, the researchers said.

Rotate Field Peas

FIELD peas should not be sown on land that grew a previous pea crop within the past 5 years.

If this precaution is not taken, growers may find their crop badly infected by disease, according to A.

L. D. Martin of the Manitoba Department of Agriculture and Conservation. A 5-year rotation is a minimum, he claims.

The fungus disease, Ascochyta, and bacterial blight are the greatest menace to field pea production in Manitoba. Both the fungus spores and the blight bacteria overwinter on the debris of the previous year's crop. The organisms can live in the soil for at least 5 years and have been known to survive as long as 12 years.

Even when rotation is practiced, growers should still treat their seed with a fungicide before planting. When land is being used for peas for the first time a fungicide with a Captan base should be used, along with an inoculant. Under no circumstances should the inoculant be mixed with a fungicide with a mercuric base. The nitrifying bacteria in the inoculant will be killed by the mercury compound.

If the inoculant is not being added an ordinary mercuric fungicide can be used as a seed treatment.

Rye Grass Best without Nurse Crop

SCIENTISTS at the CDA's Swift Current Experimental Farm, Sask., doubt that it pays to use a wheat companion crop when estab-

(Please turn to page 59)

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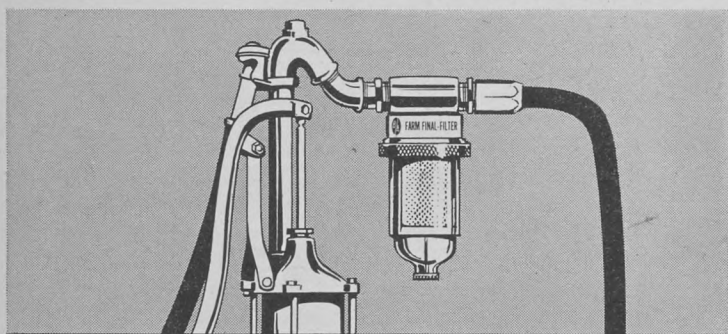
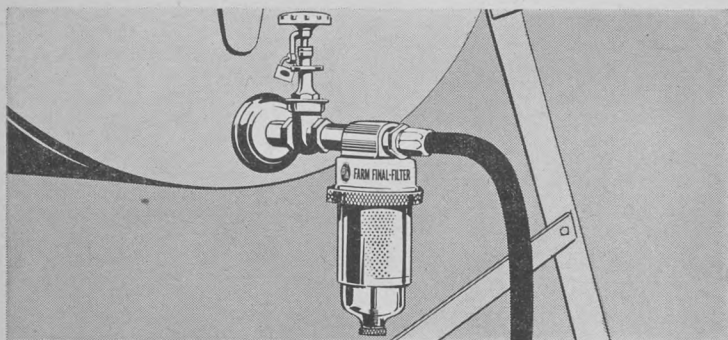
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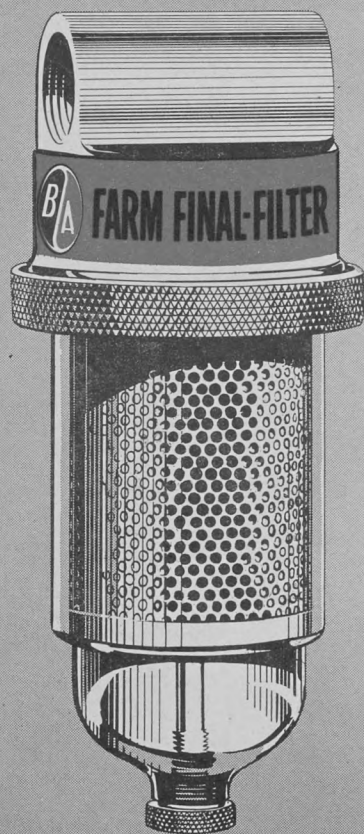
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Order direct from your nearest



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(Continued from page 57)

lishing Russian wild rye grass in widely spaced rows for seed production.

Five years' testing shows that where a companion crop was not used in the establishment year, grass seed yields averaged 101, 202, and 113 lb. per acre in the first, second and third year after seeding. This compared with yields of 2, 44 and 90 lb. when a companion crop was used.

Growers of Russian wild rye grass seed have been sowing a few rows of wheat between every two rows of grass in the first year. Wheat yields

have been comparable to those in adjacent wheat fields. This has helped offset expenses. However, researcher Dr. T. Lawrence says it is doubtful that use of wheat companion crop is economically sound because of the drop in grass yields.

Swift Current studies showed that the number of grass plants in a given length of row was the same regardless of whether a wheat companion crop was used. However, plant vigor suffered in the first year when the grass was forced to compete with wheat, and dry-matter yields were severely reduced for 2 or 3 years after seeding. ✓

How to Use Irrigation Water Efficiently

Water losses can run as high as 80 per cent

PUTTING in an irrigation system that has a low initial cost might prove a poor bargain in the long run, according to Charles Bourns, associate irrigation engineer, University of Nevada. A recent survey of water use in his state indicates that Nevada's agricultural water supply could be doubled without building any more reservoirs, drilling more wells, seeding clouds or embarking on costly water importation schemes. All that is needed is an increase in irrigation efficiency.

Irrigation efficiency in the Intermountain West is estimated to be 33 per cent, or even less. That is to say, of all the water diverted from wells, streams or lakes for irrigation purposes, only one-third reaches the root zone of the plants being irrigated. Two-thirds is lost along the way from open canals, ditches and furrows. Further savings could be made by keeping canals free of weeds, and building storage units so water could be delivered "on demand" instead of "in turns."

The U.S. Bureau of Reclamation reports that average losses from canal systems under their control is 37 per cent. This leaves only 63 per cent of the original water for the farmer. Canals and ditches through areas where seepage is high should be lined or sealed.

Bourns found that seepage losses from ditches on pump-irrigated farms were as high as 47.8 per cent for every 1,000 feet of ditch on a fine sandy loam to a low of 1.7 per cent per 1,000 feet of ditch on a very heavy clay loam. In one case, only 10 per cent of the water originally pumped was left after it had traversed 3,000 feet of ditch.

But some of the biggest losses of irrigation water were found to occur on the farm. Depending on the season and the operator, farm irrigation efficiencies ran from 78.7 per cent to about 20 per cent.

If farmers would use a properly-designed irrigation system, and learn to manage their water better, they could easily achieve an efficiency of 65 per cent. In other words, if you use furrow irrigation you can control your water better by using gated pipe for your laterals instead of open ditches. A sprinkler system will cut losses even more.

Inefficient water use is responsible for losses other than from the water itself, Bourns states. Tailwater runoff and deep percolation take valuable plant nutrients from the soil and even cause soil erosion. Crop yields are lowered through a lack of proper soil aeration, and by high water tables. Salinity is increased in the plant root zone, which further decreases yields and injures the soil structure. Health, water pollution and mosquito control problems are created.

Said Bourns, "When technical help by several government agencies and private firms is so readily available to design proper irrigation systems and advise on management principles, how can we not afford to vigorously attack this problem of low irrigation efficiency?"—C.V.F. ✓

Champlain Barley Recommended in Que.

THE Quebec Seed Board has recommended the new barley variety Champlain for growers in all parts of the province.

Champlain is a six-row, smooth-

awn feed barley. It was developed at Macdonald College from a cross between Montcalm and Moore. The heads are semi-compact with erect growth. The straw is strong, bushel-weight is good and it threshes well. The new variety is late maturing by comparison with other varieties and is said to mix well with Glen and Garry oats.

Seed of Champlain is available this spring, and 7,000 bushels are now in the hands of co-operatives and seed dealers, officials said. ✓

Sow Flax Early

MANY growers make the mistake of sowing flax late, believing that the crop is likely to be destroyed by frost if sown early. As a matter of fact, spring frosts seldom damage flax seedlings. Those just emerging

are tender, but will withstand a moderate frost. After the plants have passed the two-leaf stage and are hardened by exposure they will stand temperatures as low as 18°F. for a short time without damage.

Researchers suggest that flax be sown as early as the soil is moderately warm, about 1 week after wheat seeding commences is a good guide. Early sowing gives better seed yields than late sowing and generally less damage from disease and insects.

There are occasions, however, when late seeding may be necessary. One of these is where wild oat infestation is severe and it becomes necessary to first destroy the weed. If you need to sow late, to control weeds or for any other reason, use Raja. A new race of rust has appeared which can attack Marine, Cree, Army and Redwing. ✓

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"How do you like that? . . .
Somebody hung up on us!"

How to Grow Rapeseed

TESTS reveal that rapeseed will yield higher and that the oil content will also be higher in the Parkland areas of the western provinces than in the Prairie regions. The reason: rapeseed likes a cool, fairly moist climate best. In the southern regions where hot winds are more frequent and evaporation is faster through the months of July and August, yields and oil content are much lower.

Rapeseed should be sown on rich soil and good summerfallow. While it will grow on practically any kind of soil, the lighter the soil, the lower the yield will be. The best soil on the farm and land which is free from mustard should be selected.

Remember: wild mustard can't be cleaned out of rapeseed; nor can it be sprayed with weed killers. Wild mustard will lower the grade and rapeseed will be graded "Sample" if it contains more than 10 per cent wild mustard.

Rapeseed should only be sown on good summerfallow. To kill small weed growth before seeding, shallow cultivation is essential. Harrowing will make a smooth surface and packing before seeding makes a good

solid seedbed. A solid seedbed is important to make shallow, uniform depth of seeding possible.

Rate of seed per acre: Argentine type, 4 to 6 lb.; Polish, 5 lb. If sown in 12-inch spacing, instead of 6-inch, open the seeder to sow one more pound per acre. Remember, a 12-inch spacing cuts the seed per acre rating in half. Higher yields are obtained in 12-inch spacing under dry conditions.

The size of the seed is too small for ordinary seeders. A grass seeder attachment will do a fair job. It can also be mixed with fertilizer and sown through the fertilizer seeder. Fertilizer in this case not to exceed 30 lb. per acre. Mix only the day of seeding and no more than can be sown within a 5-hour period on the same day. Fertilizer of the same type and quantity as will respond best to wheat on your soil will also respond best to rapeseed.

Don't sow deeper than 1 to 1½ in. An ordinary seed drill usually sows the seeds deeper than this so release the pressure of the disc and let the weight of the disc make a depth of 1 to 1½ in. Depth control is most essential.

A press drill with the new depth control is the ideal machine to use; in this case, the tension springs on the discs do not have to be released. Don't pack or harrow after seeding with a press drill.

Sow rapeseed on clean summerfallow since 2,4-D and other herbicides cannot be used as for grain crops. Carbyne and Avadex, for wild oat control, are effective and can be used with safety if you follow the directions on the labels.

Diseases, so far, have not been a serious hazard in the production of rapeseed. But to take precautions, it's wise not to sow 2 years in succession on the same land. Healthy, good germinating, preferably Certified seed should be used.

Insect control is more of a problem in rapeseed than in grain. Treat with Gammasan before seeding to eliminate the hazard of the flea beetle and wireworm. In dry seasons, it is often necessary to spray for insects such as: diamond moth larva worm, beet web worm and bertha army worm. These insects make their first appearance when the plants are in the flowering and podding stage.

The only safe and effective chemical to be recommended is Dylox. Dylox will kill all three insects and the residue of the poison dissipates faster on the plant and seed than with other insecticides. It might be

best to talk with your ag. rep. before using something else.

Rapeseed shatters easily. Swath when 75 per cent of the pods have a straw color and the seed in the greener pods has turned black in color. It will not deteriorate in the swath because of rainy weather, like grain does, because the swath is not so compact. Air can get through the swath and it dries sooner after a rain.

Regulate the speed of the reel: don't use more reeling than absolutely necessary for cutting. The conventional pull-type swather is an ideal machine to use. After it has been swathed for about 7 to 10 days, it can be combined.

Any combine will do the job. The speed of the cylinder should be reduced to about 600 r.p.m., concaves lowered down as far as possible to avoid cracking. It threshes very easily. A sieve, size 7/64 round hole, should be used to make a clean job of threshing. Use a fair blast, about three-quarters of that used for wheat. Though the seed is small, it is fairly heavy and will not easily blow over the sieve. The shutter of the chaffer sieve (upper) should be set at 20 degrees; the lower sieve opening at 5 to 10 degrees. If 7/64 round hole sieve is not available, cut down on the chaffer sieves (upper and lower).

Rapeseed is an oily seed and will heat quickly in the bin if not dry. Thresh when it is well cured and the weather is dry. A moisture content of 9 per cent is dry. It should not carry over 10.5 per cent moisture for safe storage. The afternoon of a sunny day is the best time to thresh. It is wise to take a sample to the elevator for moisture testing immediately after you start combining. Rapeseed will take in moisture very quickly through the night but will also dry very quickly after some hours of sunshine.

For example: it may be 15 per cent moisture at 8:00 a.m.; 14 per cent at 10:00 a.m.; 10 per cent at 12:00 noon; 9 per cent at 2:00 p.m.; and down to 8 per cent moisture by 3:00 o'clock.

Bins and grain boxes should be tight to avoid leakage.

Rapeseed has, in the past, been usually grown under contract by various organizations. In the past few years, farmers have been taking more chances in marketing and are growing it without a contract. A few companies offer contracts but most are handling rapeseed on the same basis as grain. Anyone interested in growing rapeseed should contact their elevator agent for information on production, including the use of fertilizer and insecticides. — *Condensed from the Grain Grower.* ✓

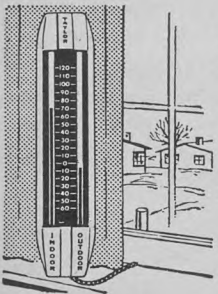


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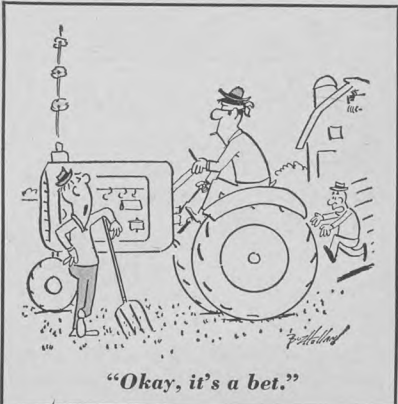
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Check Varieties for Your Area

THE seed and nursery catalogs are arriving in the mail. This is the time to make plans for vegetable and flower gardens and to order seeds, trees and shrubs that are required.

However, some varieties listed in the catalogs will not be suitable to a particular area. It is, therefore, important for the less experienced gardener to obtain a list of the varieties recommended for his area. It pays to select the best variety and to use good seed.

This is true not only when buying vegetable and annual flower seeds but it is even more important when purchasing perennials, shrubs and trees as they are more expensive and require more time to become established.

A wise precaution is to check first with your local horticulturist or agricultural representative who is in a position to advise on the varieties best suited to your particular area. ✓

Get Rid of Unwanted Scrub

UNWANTED trees or brush can be killed by chemicals at any time of year. The basal-bark treat-

ment is useful on a wide range of trees with trunks less than 6 inches in diameter. Apply enough 2,4-D/2,4,5-T ester mixture to thoroughly cover the bottom 12 inches of trunk and any exposed roots. Oak, hickory, basswood or ash are best treated from now until June.

For trees larger than 5 or 6 inches in diameter the "Frilling" treatment can be used. A ring of continuous overlapping cuts is made around the tree with an axe. The chemical mixture is then painted or sprayed on the freshly exposed wood.

Use 2,4-D/2,4,5-T ester mixture at the rate of 2 lb. acid per 10 gals. of fuel oil for most species. For Hawthorn use 2,4-D ester at 3 lb. acid per 10 gals. of fuel oil. ✓

Check Gladiolus Corms

GLADIOLUS corms should be checked at regular intervals for thrip damage and disease. If conditions are suitable, thrips will feed and multiply during the storage period.

For effective thrips control, horticulturists of the Ontario Department of Agriculture recommend dusting corms with 5 per cent DDT using 1 oz. of dust per bushel of corms. A small number of corms may be

treated by shaking them with a small amount of dust in a paper bag. Discard corms that show signs of disease or corms that have brown markings on them. ✓

Pruning Lilacs Should Be Minimum

NO regular pruning is required for lilac bushes except to remove suckers and dead flower heads. Suckers should be cut back whenever they become fairly numerous and the dead flower heads should be removed after the blooming period.

P. D. McCalla, supervisor of Horticulture with the Alberta Department of Agriculture, suggests care should be taken to leave the buds on the end of the wood when removing the dead blossoms. If these tiny swellings at the base of the old blossoms are removed the bushes will not flower the following spring. Blossoms on most early flowering shrubs are formed on this year's wood whereas the late flowering varieties form their blossoms on next year's new growth.

The purpose of pruning is to produce a graceful well-balanced shrub and to open up the center to let the air and sunlight in. This is particu-

larly important for healthy wood and flower buds on old shrubs.

These objectives can never be attained by snipping the tips of the branches to make a neat round ball. The branches should rarely be clipped except in hedge trimming where thick bushy growth is required. Sometimes a branch or two must be cut back to give a balanced shape to the shrub. Mr. McCalla says this should always be done by cutting it back to a lateral branch or bud which points outward. ✓

How to Water African Violets

AFRICAN Violets (Saint Paulia) are popular house plants in a large number of homes. If given suitable light conditions, and not over-watered, they will continue to flower for a long period.

These plants do not thrive in strong sunlight, and have to be shaded or placed in a north or east window during spring and summer, but during winter they will do well in a south window.

Watering is best done in the morning with lukewarm water, care being taken not to splash the foliage. Yellow or white spots, circles or streaks on the leaves are caused by

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HORTICULTURE

allowing cool water to come in contact with the leaves when watering, or by condensation of moisture from the air due to a sudden drop in temperature, or by watering with cold water.

It is not wise to immerse the pots in containers of water, as crystals of soil nutrients tend to form on the surface of the soil, which may in time become toxic to the plant. ✓

Fertilizer Best When Placed Below Seed

THE best way to fertilize potatoes with phosphorus is to put it in a band about 3 inches below the seed pieces.

Researchers at Madison, Wis., compared this band position with four others and found that plants got more of the applied fertilizer when it was placed right below the seed.

Plants in plots where the fertilizer was broadcast took up only about 40 per cent as much phosphorus as plots receiving phosphorus in a banded application.

Radioactive phosphorus was used in the experiment. The amount the

plants took up was measured with a geiger counter.

The greatest uptake of fertilizer phosphorus by the potato plants occurred at the time the plants were in full bloom.

In this 2-week period, the potatoes took up one-half of all the phosphorus they used from the fertilizer. The researchers suggest that because of the rapid uptake, timely irrigation and nitrogen fertilization preceding full bloom are very important for optimum yields. ✓

Apple Viruses Under Intensive Study

FRUIT viruses, the cause of serious diseases of peaches and cherries, are getting a lot of attention from scientists in the major apple growing areas of the world.

The viruses—which do not affect humans—may affect growth of apple

trees and reduce fruit yields, says Dr. W. R. Allen, of Canada Department of Agriculture's research laboratory at Vineland Station, Ont.

In Canada, research on apple viruses is being carried out at both Vineland Station and at CDA's research station at Summerland, B.C.

At Vineland Station, viruses have been isolated successfully and they are now being studied for physical, chemical and biological characteristics. An antiserum to one of them has been prepared and it will be used to determine links with other plant viruses.

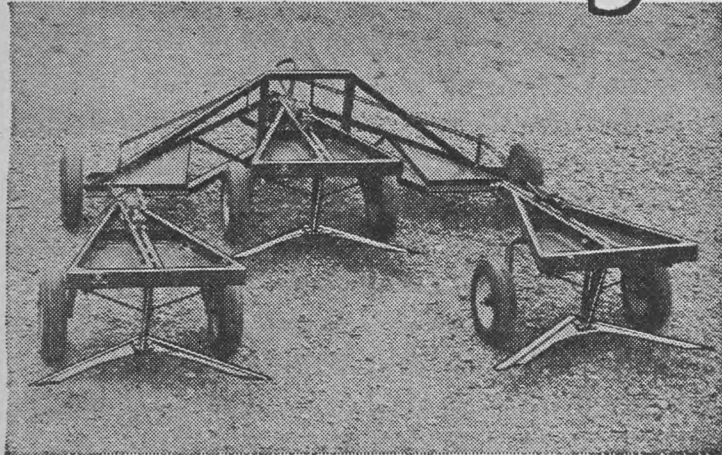
Isolated, individual viruses will be used on healthy apple trees to find out if they cause a recognizable disease, Dr. Allen explains.

"This step is extremely important because any one tree may contain several viruses. Some of them may be latent and cause no discernible disease," he adds.

Dr. Allen is hopeful that once a virus-disease relationship has been established, further studies will lead to the development of control measures. ✓

Management

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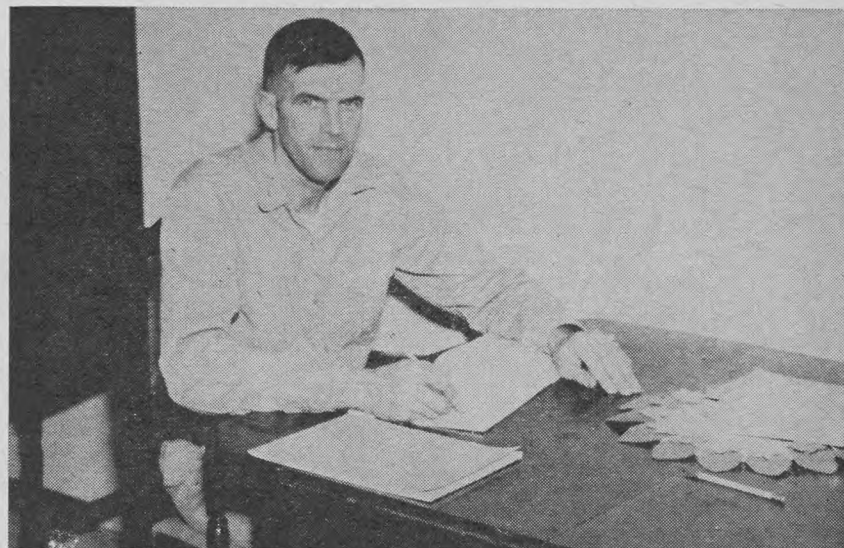
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Jim Webster belongs to a farm management club and watches production costs. [Guide photo]

Know What It Costs

by CLIFF FAULKNER

ABUILDER who uses a "sharp pencil" in figuring is the one who usually manages to stay in business, particularly when he's operating in a buyer's market. This is doubly true of the farmer because he operates in a perpetual buyer's market. When he attempts to "build" meat on his livestock, or bushels into his grain fields, he has to keep a sharp eye on production costs. The only way he can find out what his costs are is to have an accurate record of everything it takes to produce a pound of meat or a bushel of grain.

Jim Webster, who raises beef and wheat about 4 miles south of Kindersley, Sask., took the first step toward getting his operation on a business basis 11 years ago when he joined a farm management club. Started by J. W. (Jim) Clarke, who

is now president of the Winnipeg Grain Exchange, this management club was the first of its kind in Saskatchewan. Out of their efforts came a farm account book which plays a key role in a farm management training service now being operated by the Saskatchewan Department of Agriculture.

"There are about 450 farms enrolled in this plan today," Jim Webster said. "Each member keeps a record of all expenses and receipts in his account book, then once a year he sends his book to the Farm Management Division at Regina. Down there they analyze your records and send back a breakdown of the cost of each item, including equipment operation. With information like this, making out your income tax form is a cinch!"

(Please turn to page 64)



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This Rugged Cockshutt Tillage Team Makes Your Toughest Jobs Easy!

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a size to suit every farm and tractor power. The Cultivator teeth are unconditionally guaranteed against breakage within normal wear limits. □ Visit your nearest Cockshutt dealer today and see this new line of Cockshutt Cultivators. Also ask him about Cockshutt's new BIG POWER line for '64.

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(Continued from page 62)

The Department also sends each participating farmer a "Farm Business Summary" which gives an overall picture of all the information collected. This enables a member to compare his farm with other similar operations on the same soil type. For instance, Jim Webster can turn to a page showing an average grain-live-stock operation on 1½ sections in the Brown Soil Zone. Space is provided for him to put his own figures alongside each item so he can make a quick comparison at any time.

"You have to be able to compare with other operations so you can see how you're doing," he pointed out. "Last year, our club members compared their operations with several businesses in town that had a similar capitalization. That's what most farms are, small businesses."

Farm accounting is Jim Webster's specialty. At present he is building an office in his basement so he can have all his records together in a convenient file. He feels that too many farmers tend to get away from their farms as much as possible in the winter when they could be using some of this time going over their operations to see where improvement can be made.

"One thing I learned from my records was that my cash operating expenses are only about half my total farm costs per cultivated acre," he stated. "For those of us raising cattle, I figure the biggest improvement can be made in our feed efficiency."

Jim raises most of his own feeder stock. His breeding herd of 25 cows is bred by artificial insemination at the Teo Lake Community pasture.

"Because of our lack of grazing land in this area it's a question of whether or not it pays to keep cows," he said. "It might be more economical just to buy feeders. Right now it's costing me about \$73 to drop a calf. This includes 6 cents a day per cow for grazing, \$6 per cow for A.I. fees and \$3 to keep each calf on the pasture during the summer."

Webster calves go into the farm feedlot in November and are sold toward the end of the following July. Jim weighs the calves three times: at weaning; after they've been on feed 1½ months; and again at the end of March. During the first week of feeding they go on a ration of 6 lb. of rolled barley, 3 lb. of grass hay and 5 lb. of oat hay per animal per day. At the end of March, the grain ration is stepped up to 15 lb. of rolled barley a day, and about 3 lb. of barley straw for roughage.

"I don't think it pays to put calves



[Guide photo]
Bed yards before cold weather starts, then it won't freeze, says Webster.

on full feed during the winter," he told Country Guide. "It's the first 6 weeks that you have to watch your feeding. I think it should be restricted during this period. Too many operators bring their animals onto full feed too quickly."

According to Jim's records, his calves gained 1.5 lb. per day during the first 1½ months of feeding. After the increase in the grain ration at the end of March, they gained an average of 2.2 lb. a day. He figures the gain-feed ratio for his calves at 1 lb. of gain for every 6.8 lb. of feed. The average market weight for his steers is about 925 lb.

"Another thing my records show me is how easily you can wipe out your profits with excessive machinery costs," said Jim. "You can put money in your pocket if you can keep these costs down."

One way to do this is to share these expenses with a neighbor or relative. Jim shares his heavy equipment costs with his father-in-law, Nelson Lewis. Both men own their own farms, but co-operate in the purchase and use of their machines. This has enabled Jim to keep his total machinery costs down to \$2.70 per cultivated acre—another figure that came out of his farm account book.

The first step in any efficient farm management program is an accurate set of records. You can't begin to make savings until you know what each phase of your operation costs. ✓

Accurate records (kept in a farm account book) show beef and wheat farmer Jim Webster such facts as these:

- ✓ It costs him \$73 to produce a calf.
- ✓ Calves gain 1.5 lb. per day during their first 1½ months on feed.
- ✓ Calves gain 2.2 lb. per day during remaining time on feed.
- ✓ It takes 6.8 lb. of feed to make 1 lb. of gain.
- ✓ It costs him \$2.70 per cultivated acre for machinery.
- ✓ It pays to share machinery with a neighbor.

Computers Pinpoint Farm Efficiency

THE successful introduction of 117 Canadian farmers to electronic farm accounting in 1963 has encouraged the federal Farm Credit Corporation to increase the number to 500 in 1964.

Participating are Part III supervised borrowers representing various classes of agriculture in all parts of Canada.

As the Corporation is committed to provide an advisory management service to borrowers under Part III until they are firmly established, it is a natural step—advantageous to both parties—to use a form of accounting that is easy for farmers to complete and is adaptable to mechanized summation and analysis.

Farmers receive assistance from the corporation's credit advisers when starting electronic accounting. They forward monthly data on their farm business, receipts, expenses, credit and physical transactions to Ottawa where it is processed. Summarized statements are returned to the farmer monthly and annually.

An electronic farm accounting code and instruction manual shows the

farmer how to set up his accounts to get the information he wants.

This may be a simple financial statement indicating the profit he is making, or it may be designed to:

- (a) determine which of his farm enterprises are the most profitable;
- (b) show where he should invest labor and capital to get more net income;
- (c) focus attention on weaknesses in management and operation;
- (d) aid in control of finances;
- (e) provide a continuous record of farm progress, credit standing or to supply basic information needed for tax returns.

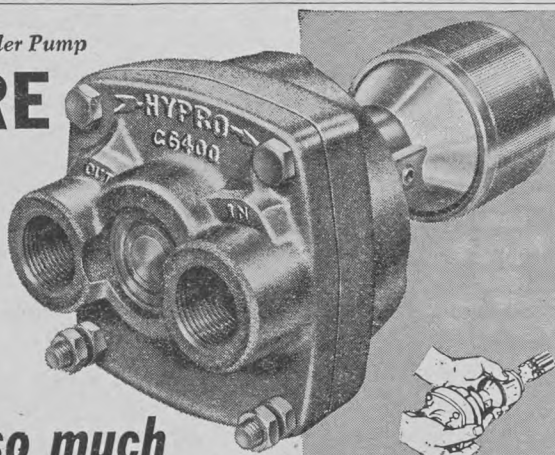
Very little time or work is needed to keep the system going. Electronic processing eliminates calculations and the tedious task of transposing and carrying entries forward. With practice, the system will show him how much it cost to produce a bushel of wheat, 100 lb. of milk, or 100 lb. of beef.

The corporation co-operates with CDA's Economics Division and with provincial extension agencies. ✓

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Dr. J. H. L. Truscott examines a new peach pie filling at the Vineland Station. [Guide photos]

Recipes for New Markets

"LUCKY is the man," said Sir Winston Churchill, "whose work and pleasure are one." I reflected upon the wisdom of this as I sat in the Horticultural Products Laboratory at Vineland, Ont., tippeling a variety of wines.

R. F. Crowther, who is in charge of wine investigations told me, "You name the fruit and we've made a wine from it; gooseberries, strawberries, grapes, apples, pears and plums—in each case we have endeavored to capture the true fruit flavor." The encouragement of domestic wine making is an excellent example of how research at the Laboratory helps extend the market for the producer.

Currently, many of our European immigrants make their own wine from Vinefera-type grapes imported

the Laboratory, refers to the co-operation of the Wine Institute; when advised that a wine is lacking in some aspect of quality it is removed from sale voluntarily.

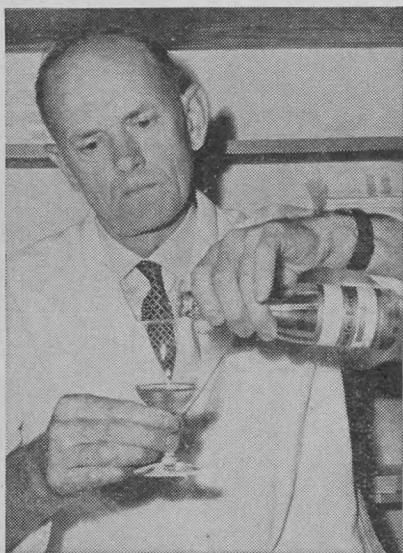
Recent changes in patent rulings now permit the patenting of developments at the Laboratory. "In the past," says Dr. Truscott, "firms have told us that they would have used an idea had there not been the immediate prospect of widespread competition."

Almost every year there are plenty of McIntosh apples and peaches. There is a periodic surplus of Montmorency cherries. All these fruits have new market potential as carbonated fruit drinks. It is a sad commentary upon the initiative of the processing industry that 6 years after the development of these ideas only one company is producing a carbonated apple beverage.

The major ice cream manufacturers are now co-operating in promoting the optimum use of fruits. The potential for the dairy industry to extend its handling of horticultural products is a further objective of Dr. Truscott.

The work of the Laboratory at Vineland can only be of value if producers grow the desired varieties and harvest them properly and on time. Work at the Laboratory and on the farm can be reduced in value without the co-operation of the processors.

Four years' work has resulted in a delectable peach pie filling; "Artificial coloring? — never in this building," says Dr. Truscott. Canadian cherry pie filling, a recent success in the British market, can vary in quality and Dr. Truscott periodically visits a volume chain store and purchases five cans of every brand on the shelves for analyses. "My word," said the awed clerk on a recent occasion, "you must like cherry pie!" Latterly it has been realized that to hold such markets as those opening up in Britain a high quality and consistent product is essential.—P.L. V



Vineland research has produced the recipes for carbonated fruit drinks.

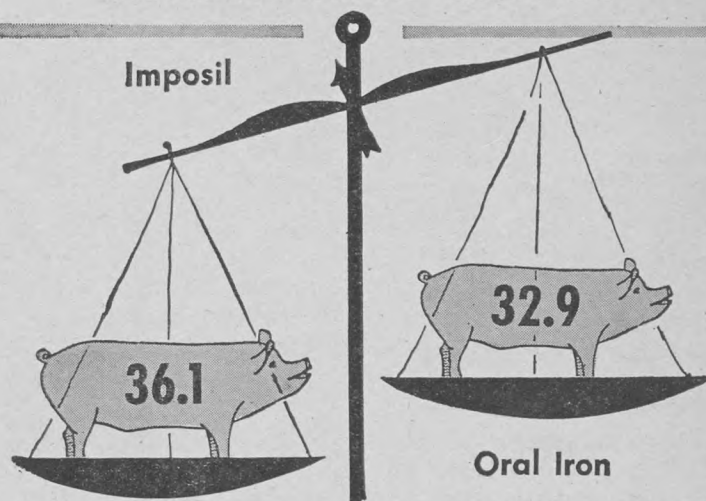
from California. When this situation arises it increases our trade imbalance with the U.S., the Canadian grower doesn't make a sale, the wineries don't make the wine and the government doesn't collect the tax. Dr. J. H. L. Truscott, who is in charge of

How Good Are Farm Records?

DR. PURNELL, director of the Farm Economics Branch, Alberta Department of Agriculture, reports that Farm Business Groups Records, started in 1958, show that the average net income per farm for one group of farms under study rose from \$4,500 to \$13,000 in 4 years.

The number of livestock per farm doubled in this period and the average equipment investment rose from \$8,800 to \$14,000 per farm. During the same period the average investment per farm increased from \$47,000 to \$97,000. Labor efficiency increased by one-third as a result of these and other capital inputs. Direct labor expenses decreased by one-third from 1958 to 1962. V

PIGS 3.2 LBS HEAVIER AT 8 WEEKS ON INJECTED IRON



A trial on 656 pigs, over a 1½ year period, at a well-known agricultural college† showed that piglets treated once only with injected iron (Imposil was used) gained on the average 3.2 lbs. more than a group dosed at 3, 10 and 17 days of age with oral iron. The experimenters concluded: "Although it cost more to inject than to dose a piglet with iron, the extra liveweight gain at eight weeks more than compensated for the extra cost of the injected iron. A further advantage in favour of iron injections was that piglets were handled only once, as against three times for dosed iron."

†Technical report on result of trial available on request.

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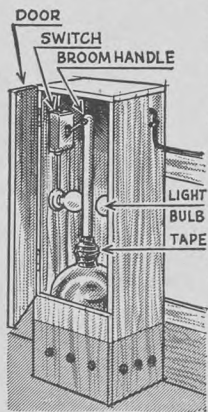
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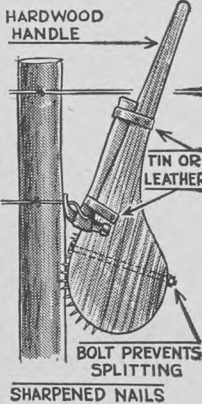
Water troughs don't have to go dry or run over if you install this simple float cut-off switch such as I use on my farm. The housing is made from 2" x 12" fir plank. A gallon jug with a broom handle fitted inside the neck is fastened to the switch connecting the pump-house motor. The water level in the trough will then be maintained by the floating jug. — J.S.T., Alta.



GALLON JUG MAKES
AUTOMATIC SWITCH
—J.S.T., Alta.

Wire Tightener

I have found this simple device comes in handy when stringing wire. Cut out the shape of a ham on a piece of 1" board. Notch it so that the hammer can be made to fit it as shown in the sketch. I inserted a bolt through the board as indicated to prevent splitting. The hammer is then attached by leather straps or pieces of tin cut to fit. Put sharp brads in the edge of the board by driving nails into it then cutting off the heads, leave about 1/2" protruding to give a grip on the post when tightening the wire. — M.M., Sask.



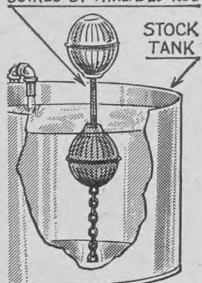
SHARPENED NAILS

Painting Metal

If you plan on painting metal porch furniture this spring try this idea to help get the best out of your paint. Rub the bare metal parts with vinegar and allow to dry. The adhesive qualities of the new paint will be much improved and it helps prevent peeling. — A.F., N.B.

Float Indicator

Faced with the problem of determining the water level in our stock watering tank located some distance from the shut-off valve we made a gauge that could be seen from a distance and save extra walking. The gauge is made of two ball floats screwed onto the end of a length of steel rod. This is anchored to the center of the tank with a piece of light brass chain which holds the lower float just below the water surface when the tank is full. When the

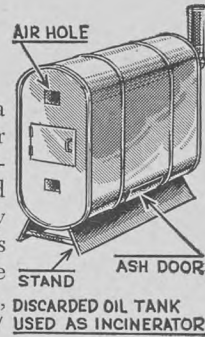


ANCHOR TO TANK BOTTOM

tank is full the bottom float pulls the top float up into a vertical position so that it can be seen above the sides of the tank. A coat of brightly colored reflective paint adds to the float's visibility. — A.N.F., N.B.

Homemade Incinerator

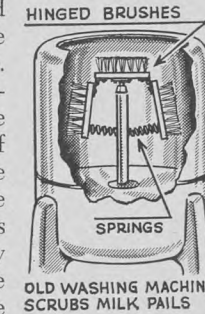
We made a handy incinerator for burning rubbish from an old fuel oil tank by modifying it as illustrated in the sketch. — J.H., Man.



DISCARDED OIL TANK
USED AS INCINERATOR

Pail Cleaner

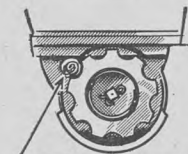
We reduced milk pail washing time to a minimum on our farm with the aid of an automatic pail washer made from an old wringer - type washing machine. Remove the agitator and replace with a piece of pipe with a flange on top. Three scrub brushes joined with heavy strap hinges are attached to the flange as indicated. Two fairly heavy compression type springs keep enough pressure on the brushes to scrub the inside of the pails clean. — A.N.F., N.B.



OLD WASHING MACHINE
SCRUBS MILK PAILS

Drill Cleaning

As seeding time approaches it will be necessary to clean out the seed cups on the seed drill. This can be quickly and easily done by tucking pieces of cloth behind the drill-feed sprockets. Turn the driving rod with a wrench two or three times and have an assistant grab the cloth as it comes through. — R.A.M., Alta.



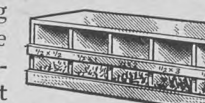
FEED SMALL ROLL OF
CLOTH THROUGH
SEEDER CUP TO FREE
IT OF DIRT

Save Plywood Splitting

When sawing plywood, prevent a splintered edge by sticking a strip of scotch tape over the line of the cut, then saw through the tape. — H.M., Pa.

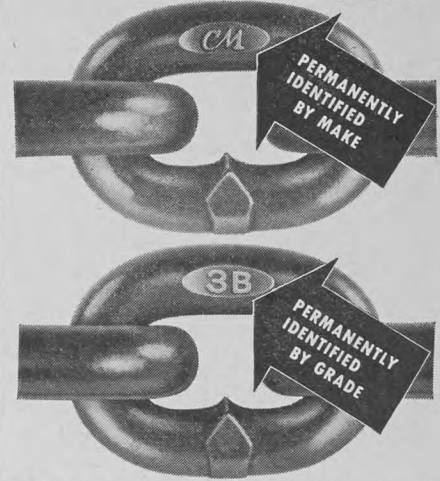
Bolt Storage

We have found that discarded poultry nests make handy bolt storage bins lined along the wall in the workshop. Remove the roost approaches and label the individual compartments with the size of the bolt or screws to be kept in their place. — J.M.H., Man.



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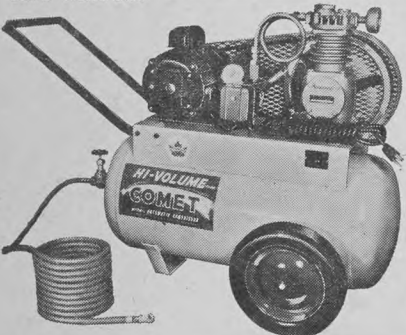
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How About a Course for Combine Operators?

SASKATCHEWAN grain farmers may have lost an estimated \$20 million while harvesting the 1963 bumper wheat and barley crop.

At least part of this figure, according to Page Harrison, director of the Agricultural Machinery Administration, could be blamed on operating combines at too high a speed in last fall's heavy crop.

The multi-million dollar figure was arrived at on the assumption that nearly one bushel of grain per acre went over the tail end of the combine. This fact was observed last fall when bright strips of green grain began showing in fields that had already been harvested.

"We have been conscious for some time now that a problem exists with losses over the straw walkers. The seriousness of the situation was evident last fall, even from the highway. In our work in testing combines at A.M.A., it was found that the capacity of the straw walkers and not the capacity of the cylinder was the limiting factor in combine capacity," says Harrison.

Too fast operation of the combine is also a factor in the loss, he believes.

"Although the design of straw walkers play a part in the grain loss, most of the problem can be attributed to overloading. The reason for this situation is not easy to relate, but it has its beginnings with the design engineer who must provide reserve power in the motor so that the combine can climb hills, and propel itself through soft soil. Under normal conditions the operator takes advantage of this reserve by maintaining high feed rate which in turn results in overloading the walkers."

Mr. Harrison did not entirely credit operators for the loss of grain and stated that in his tests it had been found the walkers were more sensitive to overloading than either the cylinder or the shoe of the combine.

He suggests a training program for combine operators.

"If operators were given a thorough grounding in all aspects of the machine's capabilities, they would be better prepared to harvest the grain in a more economical fashion."

The Agricultural Machinery Administration has received a number of letters of complaint from farmers throughout the province.

"Many farmers feel their losses are due to the shoe, because of the relative ease of determining these losses," Mr. Harrison said. "In our work to date, we have not experienced any particular problem in setting the shoe to adequately handle a feed rate even when it exceeds the capacity of the walkers. The latter may be an academic point as it is often obvious that all operators do

not have a clear idea what they are attempting to do in shoe adjustment.

"Kernel crackage was a particular problem with the 1963 harvest. Many kernels were shriveled and in order to thresh out the grain a high cylinder speed was often used. Kernel crackage is far more serious than the average operator is aware of. The vast majority of cracks are expelled from the shoe and never show up in the grain tank. We would like very much to include this factor in the testing of combines, but to date we have not found a satisfactory method of determining the losses due to crackage."

Mr. Harrison stated that grain losses had been made ever since the beginning of threshing.

"Farmers are leaving some of their profit on the ground and their operating expenses, taxes, machinery payments and living costs are in the grain tank," he said.

Combine manufacturers revealed they were aware of the problem and are working to combat it.

One major manufacturer has designed a new cell type separating grate that will be used in place of the conventional finger grate. It is more efficient at slowing material coming back from the cylinder. The

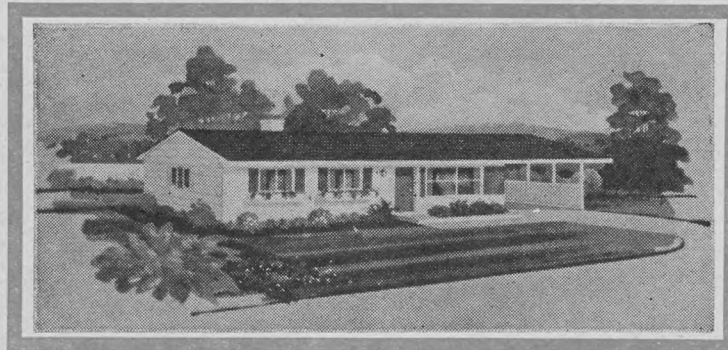
company engineers maintain chaff pockets are broken up, kernels deflected down through the cells to the grain conveyor. In this manner, they claim, less grain reaches the straw walkers and, consequently, the walkers are more effective in saving remaining grain. The company also claims that the invention would mean the operator could travel from a half to three-quarters of a gear faster because of the lighter load imposed on the straw walkers. V

Revolutionary Plow May Save Moisture

A TEAM of engineers working at the National Institute of Agricultural Engineering near Edinburgh, Scotland, believe they have solved most of the basic problems

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associated with rotary plowing," reports Alastair Strathearn in "The Farming World" program broadcast weekly in the BBC General Overseas Service. The rotary plow makes use of the power take-off from tractors to drive a helical auger which turns the soil, instead of operating with the forward movement of the traditional moldboard plow with a share that cuts into the soil and a breast or moldboard which turns it.

"They have replaced the traditional moldboard on the plow with

a rotary one in the shape of a helical auger," said Strathearn. "The plow has a bar point and a normal share with three helical blades on the auger driven by the tractor power take-off at about 120 revolutions per minute, against the direction of travel. It is the angle of approach and the different shape of the blade that makes the plow different from others. Although the drawbar horsepower requirement is reduced by 30 per cent the total power requirement remains the same.

The basic object is to do what the moldboard can do, but at the same time break up the soil to get half way, or if possible the whole way, toward the preparation of the seed-bed. The type of finish produced is suitable for drilling direct, equivalent to one cultivation after ordinary plowing."

The rotary plow still inverts the furrow, Strathearn explains, and the reduction in draft made for higher speed. Wheel-slip was also reduced, so that when working in wet or adverse conditions there was no need to add additional weight to the back of the tractor to counter adhesion;

equally important was the lessening of damage to the soil due to wheel tracking.

In his view the most important advantage was the saving in time, and thus in labor costs, by cutting down on cultivations. "In countries where speed of preparation and the keeping of moisture in the soil is of paramount importance, the rotary plow may well be the answer to many plowing problems," he said. V

Steel Nozzles Are Safer

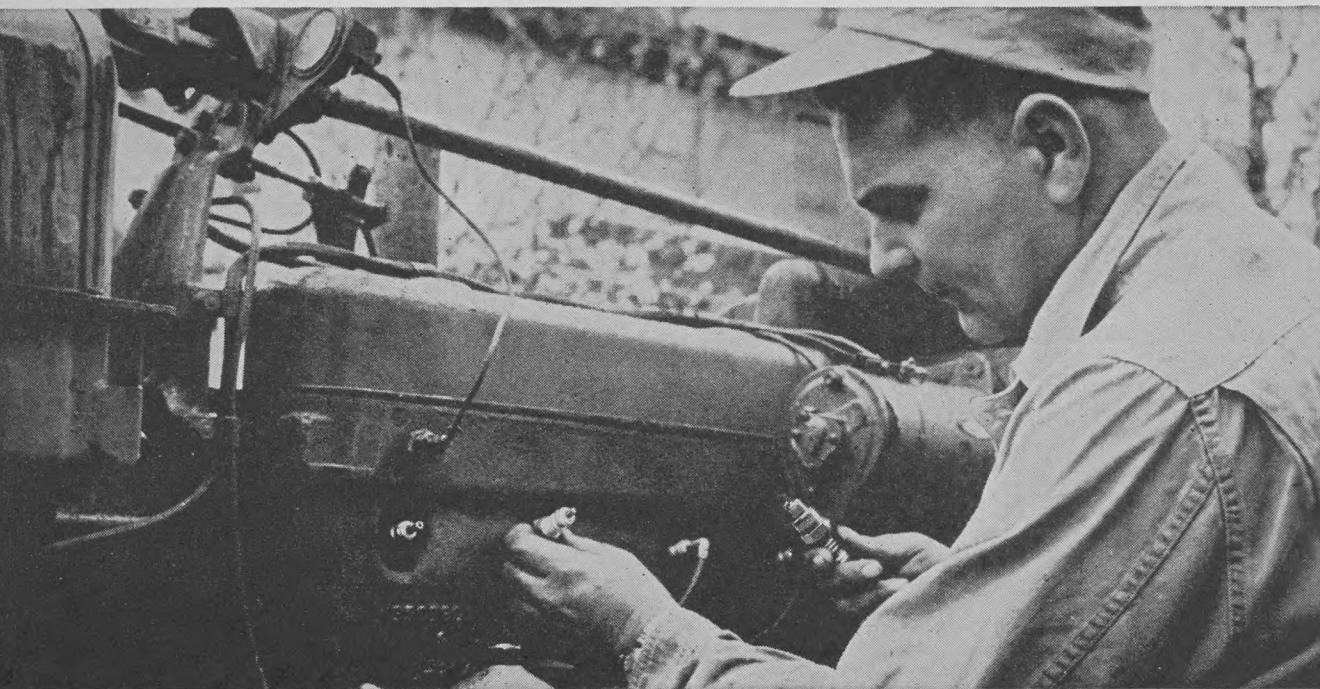
A FIELD experiment at O.A.C. has shown that Atrazine is best sprayed with stainless steel or hardened stainless steel nozzles because brass nozzles wear rapidly.

"The experiment showed that although steel nozzles cost 3 times as much as brass, they last 4-20 times longer. When the opening in a nozzle wears, more spray is delivered. This is one of the causes of residue damage of a wettable powder such as Atrazine," says Prof. Dave Clark, Engineering Science Department, O.A.C. He advises that brass nozzles can apply chemicals like 2,4-D in solution effectively, but if more than 50 acres are to be sprayed yearly with a wettable powder, stainless steel nozzles should be used.

The experiment was conducted in the following manner. Five brass nozzles, 4 stainless steel, and 4 hardened stainless steel nozzles were first calibrated and then put on a spray boom. The 13 nozzles sprayed 100 acres with Atrazine or each nozzle covered approximately 8 acres. The pressure was 80-90 pounds per square inch instead of the usual 30-40 pounds per square inch. The higher pressure was used to study the effect of pressure on the herbicidal activity of an early post-emergence application of Atrazine. The nozzles were recalibrated after this use.

The average increase in the quantity of water delivered by the nozzles was: brass, 30.8 per cent; stainless steel, 1.6 per cent; hardened stainless steel, .4 per cent. V

Here: 5 fast ways for you to get more horsepower – more gas economy from your tractor



Recent studies by tractor engineers show that even a minimum tractor tune-up will restore an average 11.2 per cent of horsepower and improve gasoline economy by 13.3 per cent. Here's what the engineers recommend to you.

Even though your tractor *seems* to be operating all right, maintenance neglect takes a higher toll in lost power and wasted gasoline than you realize. And these losses result from a need for *minor* maintenance.

"Minor" Tune-Ups Studied

In arriving at the figures of 11.2 per cent loss in horsepower and 13.3 per cent loss in gasoline economy, the engineers made the following tune-up operations:

1. Adjust carburetor
2. Service air cleaner
3. Set timing
4. Adjust governor
5. Replace spark plugs

In some cases, points and condenser were also replaced. Of these five operations, spark plug replacement pays the biggest returns when a tune-up is needed.

Plugs Pay Off Fast

Tests show that replacing *spark plugs alone* can restore 6.7 per cent of horsepower and improve gasoline economy by 7.9 per cent. This was proved by the recent tune-up studies and in hundreds of "borderline" spark plug tractor tests made by agricultural colleges and by engineers over the past five years.

In these tests, all evidence points to the fact that the most economical time for replacing tractor spark plugs is every 250 operating hours. Since the average tractor operates about 600 hours a year, twice-a-year plug changes will meet the average tractor's need.

When Should You Tune-Up?

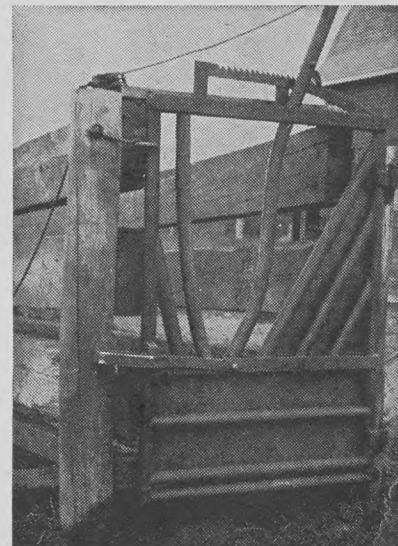
On the average, twice a year is the recommended interval. As the engineers point out, it is uneconomical to try to "stretch" the life of spark plugs. The losses in power and gasoline cost far more than a set of new Champions twice a year.

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Chute Adjusts Easily



A strong chute gate is made of heavy steel pipe on Glen and Rex Armitage farm, west of Red Deer, Alta. The head bar pivots on a single bolt at the bottom and is adjusted by a pull on the rope just visible at the left.

[Guide photo]

Which seed is the Best Buy?

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you can prove for yourself which source of seed is the best buy. U.G.G. seed is priced according to the U.G.G. Pure Live Seed Formula.

This is the Formula:

Asking Price	= Price of Pure Live Seed
Purity X Germination	

Here is how it works with the two bags of seed shown above:

If Registered No. 1 or No. 2 Selkirk seed wheat from United Grain Growers costs \$2.50 a bushel, and unsealed field-run Sel-

kirk costs \$2.25, you seem to be saving 25 cents a bushel with field-run seed. But are you?

U.G.G. seed wheat is guaranteed 99.7% pure, but on field-run Selkirk the pure seed is often as low as 92%. U.G.G. seed wheat has a germination value of 95%. Field-run seed wheat often slips below 85% germination. Now let's compare prices on the basis of the Pure Live Seed Formula:

U.G.G. SELKIRK COSTS			
\$2.50			per bushel
$.997 \times .95$	=	\$2.64	of Pure Live Seed
FIELD-RUN SELKIRK COSTS			
\$2.25			per bushel
$.92 \times .85$	=	\$2.88	of Pure Live Seed

So, on the basis of Pure Live Seed, a bushel of U.G.G. seed actually costs 24 cents less.

Forage seed from United Grain Growers costs less too. With a sharp pencil and the U.G.G. Pure Live Seed Formula, you can save money on all your seed!

Close figuring is especially important this year: last summer's hot spell hurt the viability of much seed. You might pay highly for the hidden cost of "bargain seed" that hasn't been tested for germination.

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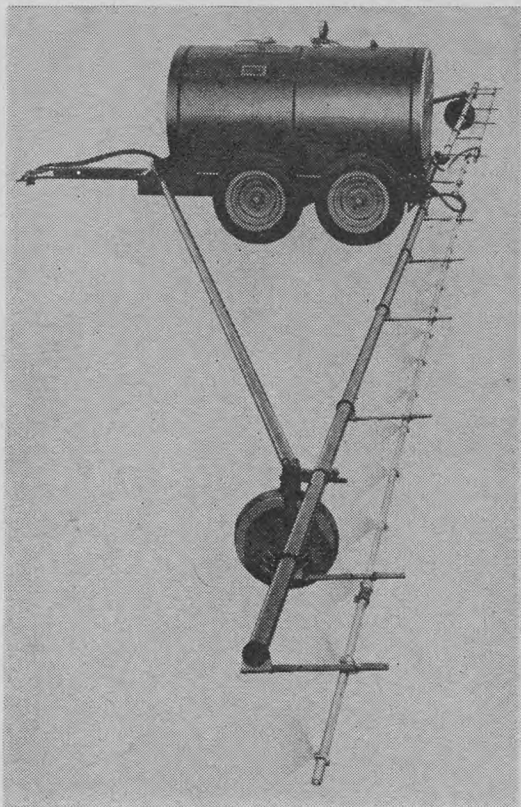
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What's New

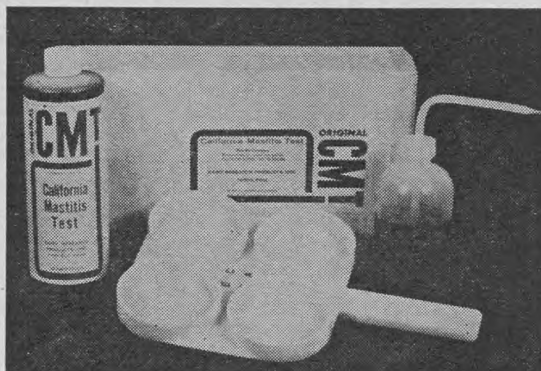


New Sprayer

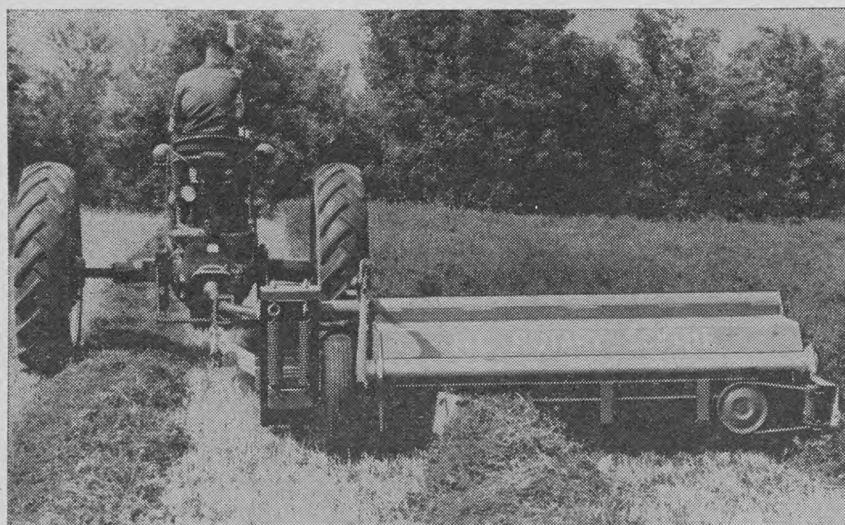
The New Spraymaster H-400 is designed primarily for medium to large operations and has a 58-foot boom coverage. Aluminum tank capacity of 420 Imperial gallons capable of spraying 125 acres. Traveling at 5 m.p.h. the H-400 covers 35 acres per hour. Boom stability is maintained by stabilizers on outrigger wheels. The two outer booms can be changed from field to trail position in 90 seconds. Manufacturer claims tandem trailer provides even load distribution, smooth ride, minimum soil compaction. The sprayer is believed to be the largest designed in Western Canada for mass production. (Golden Arrow) (454) V

Mastitis Detector

The California Mastitis Test is a new method of detecting milk from cows infected with mastitis. Developed for use with either foremilk or stripplings at the side of the cow it can also be used for mixed or bulk milk at processing plants. For on-farm use it can direct attention to the individual quarter secreting mastitic milk. Manufacturer claims if used weekly on a herd basis with recorded results it is possible to detect mastitis in the insipient stages. (VioBin (Canada) Limited) (455) V



Side Delivery Mower



Rubberized windrower belt on right delivers hay to the left side of the Model 7A M-C Rotary Scythe. The new modification is said to be functional in making wilted silage or haylage. (Mathews Co.) (456) V

For further information about any item mentioned in "What's New," write to WHAT'S NEW, Country Guide, 1760 Ellice Ave., Winnipeg 21, Man. Please quote the key number that is shown at the end of each item.

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dangerous friendship

by ISABEL REIMER

WITH a sense of foreboding, the doe followed the fawn from the willow thicket. Her large ears tautened backward as a car swished past on the highway. The fawn, accustomed to the traffic of the past summer, paid scant attention and continued through the rustling carpet of dry leaves. Heedless of his mother, he crossed the ribbon of blacktop and headed for the house on the granite slope. Habit had taught him that the boy would be there and, where the boy was, so were tempting morsels of food.

The doe watched with a wariness the little buck had had no reason to learn. For this, their habitat, was a sanctuary—the White Pine Game Preserve. But, unlike the mother, the fawn was not yet aware of the ways of man. A remnant of memory caused the doe apprehension. For it had been on an equally bright, crisp morning long ago, that she had first examined human scent, and disaster.

Now, as in all years when the season of the first frosts came, she knew that danger lurked in her wilderness world, a danger she was powerless to combat. Mingling with fear, a vague, underlying loneliness welled within her, creating an over-anxiety for the safety of her offspring. In an attempt to divert him, she stopped now and then to browse. But at last, she quickened her steps, and when the fawn gained the edge of the clearing at the top of the slope, she was by his side.

Her questing nose caught the scent of man. Her nostrils dilated. When she saw the boy, she tensed, ready for flight.

The lad called softly, "Hello, Timid! Hello, Little One!"

The doe's ears alerted and a quivering, exquisite tingling, half pleasure, half fear, tremored through her. The boy had been her friend. But he reeked of the man-smell, and man had been her foe.

Fearlessly, the fawn walked toward the lad. But the gentleness of the voice did not allay the doe's distrust. Striking the granite with a hoof, she summoned her impetuous calf to follow her into the forest. But he was already nosing the boy's hand.

"Aren't you clever?" the lad said. "You and your mother haven't been here since before the mating season, but you know I have something for you." He gave the fawn part of an apple. The fawn ate greedily, nosing for more.

The doe snorted.

"What is the matter, Timid? I won't hurt your baby. Come, have some apple." The boy extended his hand.

The doe raised her muzzle, sniffing the tantalizing scent. Conflict struggled within her. The boy, possessing a natural affinity with the creatures of the wild, and understanding their ways, stood motionless, talking softly all the while.

Illustrated by EMILE LALIBERTE

Her anxiety quelled, the doe felt no cause for alarm. The car stopped. A man jumped out, lifted a rifle to his shoulder and aimed.



"If I did right by you, I'd stone you into the bush," he said. "But then you would never trust me again. The hunting season opens today. Even here in the preserve you're not safe."

The doe slowly, hesitatingly, walked toward him, cautiously accepted the apple, then backed away.

"Poachers killed five deer along the highway last year," the boy said, his voice catching. "They cut off their hind quarters and sped across the preserve boundary before my Dad could catch them. A warden can't be everywhere. So you'd better stay in the forest."

The doe's liquid eyes watched him as he sat down on a stump. Under the spell of his voice her trepidation gradually subsided and, as always when they were together for a time, a kinship—the kinship of the wild—passed between them.

As if happy at the turn of events, the little buck kicked up his heels and cavorted around the yard, white tail flagging. Ignoring her son's antics, the doe ambled to the edge of the clearing and browsed peacefully and unafraid.

"How did you get that scar on your thigh, Timid?" the lad mused

aloud. "It could be an old bullet wound. Perhaps that is why you are so nervous."

But the boy had no way of knowing the doe's experiences in her encounters with man, experiences that had left her in a bewilderment of fear and affection. Although she did not live by reason, inherent instinct alone did not entirely direct her life. Associations, that from the time she was a fawn stepping high by her mother's side, until now, listening to the murmuring voice floating toward her, had taught her that man was both foe and friend. He had tried to kill her and he had saved her life.

"Your baby has lost his spots and you're dressed in your gray-brown winter coats," said the boy. "You're the same color as the woods, better for hiding."

Slowly he arose. "I have to go now and have breakfast, or my sister and I will be late for school."

But before entering the house, he turned and warned again, "Now remember, stay in the woods and away from the highway!"

SOON after he had gone the deer left the clearing. They kept to the forest for awhile, but before long

they came out to the blacktop. Recrossing it, the doe led the fawn to the crest of a rocky ridge, overlooking the highway. A car appeared in the distance. Blandly, the doe gazed as it approached. Her earlier premonition of impending danger had passed. The car drew closer.

Against a backdrop of balsam the deer stood on the ridge, vulnerable targets. But the fragment of memory that had seeped to the doe's brain and made her wary, had been dispelled by the boy's soothing voice.

It was five years since that bright, crisp morning when human scent had first assailed her nostrils. She had been a fawn hugging her mother's flank, when suddenly the still morning air had exploded. Shots had been everywhere. She bolted across a firebreak. The piercing thrust of a bullet seared through her thigh. She stumbled, recovered, and leapt into the forest shelter.

Hidden in a covert of dense spruce, she stood trembling. There, with pain throbbing her leg, she waited through the long day for the mother that did not come.

Darkness found her still in hiding, but when the moon was high, hunger drove her from the refuge. Limping, she foraged for food and broke the skin-ice of a pool and drank. She bedded down in nearby grasses, instinctively lying with her back to the wind, and mewled in pain for her mother.

Dawn found her browsing farther afield. As the rising sun cast a glow over the fir and spruce tops, she crossed, unbeknown to her, into the White Pine sanctuary where she was to spend the rest of her days.

ALTHOUGH the wound healed, her leg pained, an ache that was to return oftentimes to plague her. The loneliness of a fawn bereft of its mother lingered, but eventually she adapted to the new condition. Sometimes, in her quest for food, she stopped awhile and frisked among the shadows, or gamboled through the frozen grasses of a meadow. Until there came a time when she no longer remembered her mother.

In early winter she crossed a snow-blanketed lake when, suddenly, she

came upon glare ice. Her feet shot under her and she landed heavily on her side. She tried to get up. Her hoofs slithered. Time after time she spread-eagled on the slippery surface. She could not recover footing.

At last, lying panting, her leg paining, she mewled for the mother she had forgotten had existed. Then she caught the dread scent of man. She saw two figures coming toward her. Wild with fear, she struggled frantically to escape.

"We'll tie her feet together and drag her onto the snow," said one of the men, as they approached.

She fought, but finally, close to exhaustion, she lay trembling. They dragged her across the ice, then untied her feet. In a tumult of fear, she gained footing and bolted for the mainland. Her animal brain did not reason that the men had been her friends. She only knew she had escaped the foe.

When the big snows came, hungering for companionship, she trailed a doe and her twins, and they met with other deer. Soon after this attachment, she learned that besides man she had another adversary, one which her mother had had no opportunity to teach her.

Hungry wolves came from the north and, crossing the lake-ice to the cottaged shore, fell upon the deer spoor. But the wind veered and the fetid, canine odor warned the prey.

Lunging through the snow, the deer gained a plowed road where they lengthened out in desperate flight. Caught unaware of the danger the fawn tailed the herd, a tempting morsel for slaving fangs. She sped with winged feet, but little by little the gray, gaunt forms gained. She sensed them at her heels. Frenzied, she leapt to the left to a well trodden path, and in a tremendous burst of speed, broke into a clearing.

But another enemy cut off escape. A man stood by a woodpile. She wheeled, then stopped abruptly. Terrified, she stood between enemies, her sides heaving like bellows. In the clearing, with the man on one side, wolves on the other, she made her choice. She chose the man, and in utter bewilderment she found him to be a friend.

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He stood motionless for a time, then entered one of the several cabins snuggled in the snow-shrouded pines. Reappearing, he walked to the edge of the clearing and placed food beside a salt lick.

THERE, within the man-scent, she spent the winter, skirting the cluster of cabins, always drawing closer when the wolf-smell fouled the air, or when the pack's baleful howling split star-pocked nights. With others of her kind she was fed, but upon the man's approach a complexity of emotions stormed through her, not the least of which was affection.

At last, when the warmth of the sun melted the snow and eased the ache in her leg, when her coat turned tawny red and the tender shoots grew succulent, when the wolves retreated inland and the deer disbanded, she extended her range. She was no longer a fawn, but a yearling.

As summer made its debut, she gradually learned to tolerate the influx of cottagers and the tourists who came to stay awhile at the man's cabins. She timidly accepted their tidbits, but never without trembling agitation. Then one morning she crossed the highway, and found the house on the granite slope and the boy who dwelled there the year round. Between the boy and the man of the cabins, she made her range.

In the fall of her second year, a new urge welled within her. She listened to mating calls, pawing of hoofs and clashing of antlers. At first she remained aloof, but the time came when nature could no longer be appeased. She answered a call with a coughing reply. For a spell she kept company with a young buck. When the rutting season passed, he left her, and the great aloneness returned.

But in the spring she sought out a dappled glade, and in its velvety moss she gave birth to a spotted fawn, a replica of herself. She lowered her head and nuzzled it with a tenderness born of yearning.

Nature endowed her prolifically with young. In the springs of her third and fourth years, she dropped twin females. So great was her fear of loneliness, that when they grew to be yearlings, she did not repulse them, but cleaved to them until the following autumn, when they left of their own accord.

It was not until her fifth spring that her first male fawn was born, and of all her progeny, he was the most precocious. While he gamboled at the yearlings' and her heels, summer drifted into the season of falling leaves. When the dawns of morning found the lakes warmer than the air and fog hung low, the yearlings forsook the mother. Soon a biological urge came over the doe, and she ignored her little buck for a time.

WHEN the mating season passed, and mother love dominated once more, the fawn was nowhere to be found. The doe belled, ears funneling forward to catch a responding mewl. But only a soft wind in the treetops answered. She spent the night hunting for her lost one with the old loneliness growing ever

greater. At last, when darkness dissolved into light, she came upon him. She snorted, then licked his face, his ears and his body in an abandonment of happiness.

But it was not long before an intuitive uneasiness came over the doe. The days were becoming shorter, and ice was forming at night in the shallows. With each succeeding day her anxiety increased, harking back to the time of her leg wound. Then, in the clearing by the house on the granite slope, the boy's lulling voice had calmed her.

Now, silhouetted on the ridge overlooking the highway, the doe and fawn, their ears standing out like wings, placidly watched the car draw closer. Her anxiety quelled, the doe felt no cause for alarm. The car stopped. A man jumped out, lifted a rifle to his shoulder and aimed. A report shattered the morning stillness.

Terror, sudden and stark, the terror of long ago, struck the doe. Belling a warning, she wheeled and vaulted into the forest. She turned, but the fawn was not beside her. A cry, half whimper, half bellow, escaped her throat. Then, diffused in the odor of gunpowder, she caught the smell of blood. Through a curtain of balsam boughs, she saw the little buck lying on the ridge, kicking spasmodically. Then he was still.

She watched the poachers climb the embankment.

"Make it snappy!" one clipped.

Conflict raged within the doe. Instinct told her to flee. Mother love held her in the covert.

"Hurry!" urged the poacher. "There's a couple of kids coming round the bend!"

The hacking over, they dashed to the car and sped away.

The boy from the granite slope scrambled up the rocks. "It's Little One!" he wailed. "Look!" Look what they've done to Little One!" Blindly, he tore down the cliff and back the way he had come.

It was some time after the children had gone before the doe stepped from the covert. Slowly, she walked to the fawn. She sniffed the pool of blood welled in a rock depression. She nuzzled his ears, and trying to arouse him, nosed under his head. Then in an anguish of disbelief, she stood motionless, head drooping over the little buck's mutilated form.

When the boy returned with his father, she again found shelter in the balsam. She watched them take her fawn away. When they had gone, she remained concealed until the setting of the sun.

Every morning, as dawn crept over the forest, the doe returned to the rocky ridge. The great loneliness was upon her. Each day, the scent of the fawn was fainter.

On a bleak morning, when she could no longer detect a trace of the little buck, when the north wind brought a flurry of snow, and gusts swirled around her hoofs, she left the promontory, never to return. Unaware of the gestation within her, she did not know that when the long winter was over, and the trees budded and unfurled their leaves, she would once again nuzzle a spotted fawn in a dappled glade. V



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Religion is simply the consequence of our realization of Who God is. It is our striving to be honest and consistent with this knowledge—to learn and fulfill our duties to our Creator.

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If you are living in the belief that you don't need religion . . . that all you have to do is to believe in God and live a moral life . . . we urge you to ask yourself these questions—NOW: "Why am I living? Why did God create me?" The most elementary common sense answer is that you are living because God created you . . . and that God has a purpose in doing so. Catholics believe it is our duty to find out what God's plan is for our lives—and do our best to live it.

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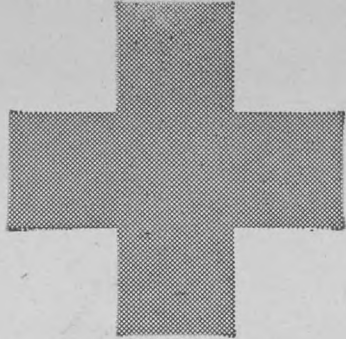
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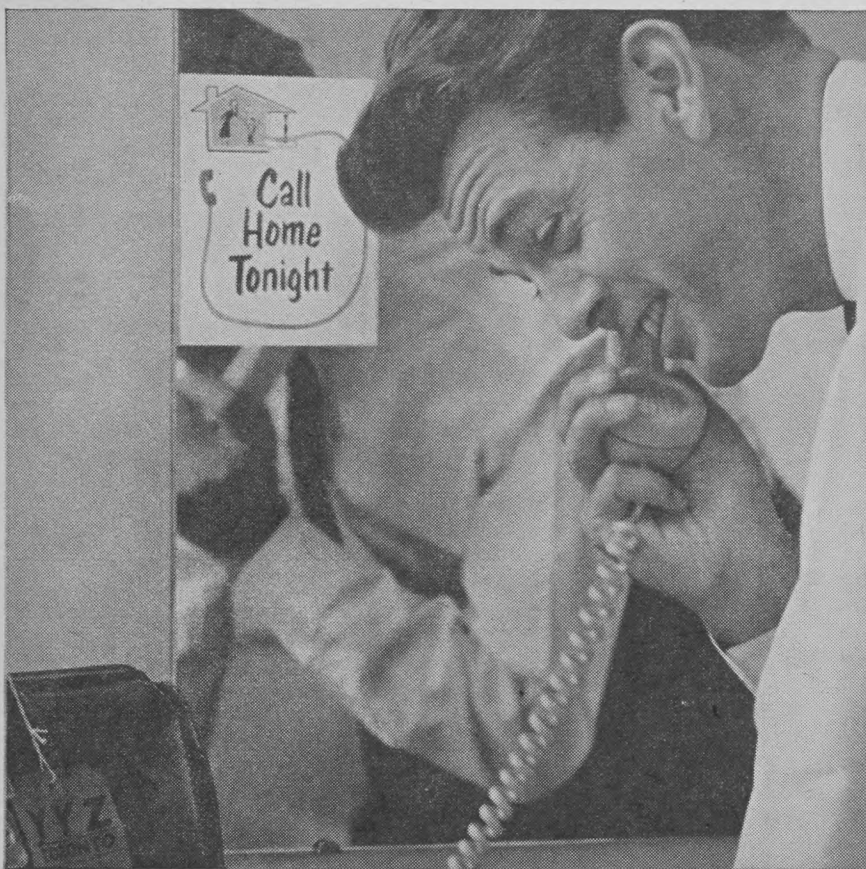
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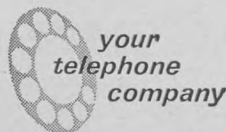
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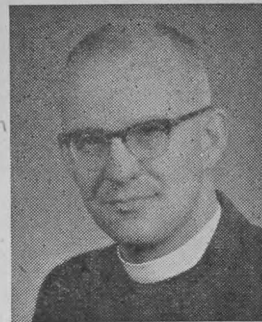
After you "check in", check home—by telephone. It quickly banishes wonder and worry—for you, for your family. With that happy "in touch" feeling, everyone can "rest assured"! Phone often.



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Let's Think It Over

by THE VERY REV. M. L. GOODMAN



Taste and See

We can have any kind of life we choose! Of course we can't quite get down to the level of the amoeba; but we can come pretty close.

From years ago I remember a house which sat in the bright fresh country side. The house itself was unpainted and delapidated—a blot on the landscape. Poverty wasn't the reason, rather it seemed to be nothing other than carelessness. The children went unwashed from one day to the next. Yet in their own way, these folks were happy. No one could explain to them the joy of cleanliness and self-respect, until they tried it.

There are other people who keep their homes and their children spotlessly clean; but life for them seems to be no more than working, eating and sleeping plus a little pleasure. They too can never appreciate the riches of a higher kind of life until they are moved to try it.

So there are these "levels" of living and at the very top is the kind of life that God wants us to have. This is a life which has gone outside itself to be with Him. No one can ever *prove* that it's a better and more satisfying life. We only find out when we try it for ourselves. We can get stuck at any of these levels of living for we tend to become satisfied with where we are and what we are. It requires an effort of will to even look higher—in faith that there are other joys and greater satisfactions.

God calls us higher to that life which will finally bring us into harmony with Him; but the choice IS ours.

Suggested Scripture: Revelation XXII, verses 10-17.

Thieves

There used to be a public service announcement which went like this—"No one would open the door to let a thief in." It then went on to warn about fire hazards. No, no one would open the door to let a thief in, but that's what we do when we decide "to run our own lives."

Our physical nature may steal our lives. If we are determined to live only for our own comfort and satisfaction, the way is wide open to laziness and sensuality. In the end we become something less than men.

So also with man's mind. If in his little time he intends to use only his own mind as the measure of all things, he cuts himself off from the richer part of the heritage of human experience. He lets into his life the thieves called cynicism, agnosticism and atheism. God cannot be captured by the mind of man until the mind of man is willingly captured by God.

What of morality? It is sufficient to study the Old Testament story and to note the teaching of St. Paul. The rigid morality of the ancient law led finally to a mechanical attempt at obedience which made men deaf and blind to the living God when He confronted them in the person of Jesus. Our own morality cannot take us beyond ourselves and may even lead us down a false road to a dead end.

Christ is come to give life! All life is in His gift and he desires to give us the abundant life—life at its deepest and richest. We cannot gain this by thought or morality. It comes only by God's gift in response to our decision to serve Him rather than self.

Suggested Scripture: St. John X, verses 1-15 and St. Matthew VI, verses 19 to end.

Keystone

Where there is no thankfulness there is no love. Being thankful means that we are in harmony with the deep pulsations of life and love by which the world was created and is sustained.

Many years ago there was an old pastor who was known far and wide throughout northern Ontario—an Irishman, named Gowan Gilmour. He was once given a new coat by a tailor in one of the mining towns. An hour later the tailor saw the old man on the street with same ancient greeny black garment that he had worn before. Gilmour had met someone who had no coat, so he had given him—not the old coat as a castoff—but the new one. Practical men might call him a fool, but Gilmour understood the love of God. On another occasion in his travels he encountered a poor woman who had to move into the city from a village about forty miles out. Her main problem was how to get her cow into town. (In those days people were allowed to keep cows in town.) Gilmour didn't have any money to give her; but he was walking to town anyway, so he took the cow with him, driving it along the CPR right-of-way. The very old people in those parts still remember that.

This is holy charity. This is doing what you can simply and wholeheartedly to help others in the name of God. This was the love of God ministered by one who loved God with a thankful heart.

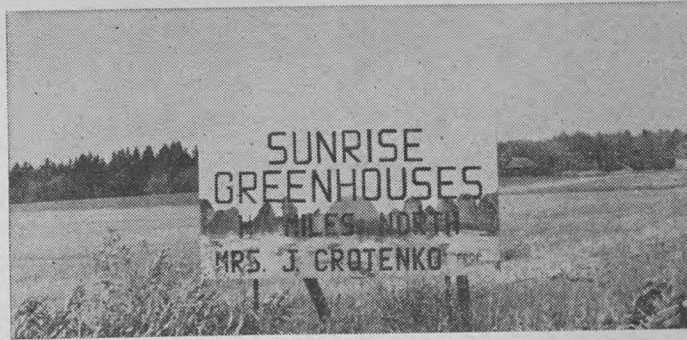
Gowan Gilmour had his share of personal troubles and sorrows, yet he was a thankful man. The quality of our thankfulness is revealed in our sense of responsibility and in our recognition of God's love.

Suggested Scripture: I Thessalonians V, verses 15-21 and Psalm 107.



[Guide photos

Jennie Crotenko points a finger at a few of the double petunias in her garden. Her success with petunias pushed her into business.



Petunias are her Specialty

Home and Family

by ELVA FLETCHER

JENNIE CROTENKO, of Hyas, Sask., energetic and enthusiastic gardener that she is, got into the greenhouse business by using her green thumb to prove that she could grow double petunias successfully. "Sixteen years ago when double petunias were becoming popular, people here couldn't seem to get them started," she told me. "I couldn't see any reason why they should be any more difficult to grow than the others. I was so convinced that it could be done, my gardening friends dared me to try. So I did."

That year she started 35 double petunias. Now she grows thousands of plants each year and people seek her advice when they are planning their home grounds. While double petunias are a specialty, she grows other award-winning selections suitable for flower beds and borders, rockeries, window boxes and planters.

"I'd always enjoyed gardening," she says. "I must have inherited any gardening skill I have from my mother. She loved flowers and people came from miles around to see her garden. As I got older I grew plants too, usually so many that I'd end up giving a lot of them away."

Jennie Crotenko's greenhouse business is an important part of her quarter-section farm operation on the outskirts of Hyas, Sask., a small community in a district known as the Garden of Saskatchewan. The greenhouses and cold frames that take up a large part of the farm home grounds are tangible evidence of a hobby that turned into a business.

Three greenhouses each hold 3 or more layers of flats. She uses 3 cold frames; one 40 feet long by about 10 feet wide, the second 25 by 10 feet and a special 16- by 15-foot cold frame for pansies. She also has a hot bed 60 by 5 feet for tomato plants.

Mrs. Crotenko starts seeding in February. "I do it all myself and, of course, I seed at regular intervals." The extent of these sowings shows up in a modest 4-page catalog.

Over the years Mrs. Crotenko has established a reputation for sturdy vigorous plants. She

hasn't any secret formula. She loves her plants but she doesn't pamper them. "Plants are like children," Jennie says. "Pampered plants are weak and don't always transplant well. My plants get rough handling and they seem to thrive on it." She does watch them carefully to see they don't overgrow.

As to soil she says, "I use good garden soil. But I do vary the mixture to meet the specific needs of the plants I grow. Some need more humus than others, you see." And, 2 weeks before plants are ready for market she gives them an extra dose of nitrogen.

During transplanting season from mid-March to mid-April and on into May, the Crotenko greenhouses hum with activity. Jennie employs two women on a regular basis during this period; at the height of the season she might have six for a full week. Friends often come to help and exchange their services for plants. "Some days we've had as many as 17 women here and then it's just like an old-fashioned 'bee'."

THE district itself is a hive of horticultural societies. "They've been so helpful," Mrs. Crotenko says. She sells hundreds of plants through societies at Canora and Kamsack; she also trucks them into Yorkton, 30 miles away. Many people in the district enjoy driving over to make their own selections.

Even during this seasonal bustle Jennie Crotenko cares for home and a family of three — 20-year-old Donovan, Lawrence, 17, and 10-year-old Angeline. She's also busy as a 4-H Garden Club leader. Last year, on her club's achievement day, members gave her a birthday cake and corsage of roses to mark her tenth anniversary as a club leader.

With her experience, Jennie's services are frequently in demand as a judge at garden club achievement days and horticultural shows. "I always try to explain why exhibits are scored down," she says, "because I feel that only in this way can

exhibitors learn where they went wrong. If they don't learn how to improve their entries they're likely to get discouraged."

For some time now she has been campaigning for courses in judging methods and in basic landscaping. For this reason she was elated with recent announcements that judges' schools are to be held in several Saskatchewan centers this year and that the University of Saskatchewan decided to sponsor a 4-day course in landscaping, the first of its kind in the province.

Now that spring is knocking at summer's door Jennie Crotenko's greenhouses are full to overflowing and that's where you'll find petunias in profusion—fluted and frilled, starred and plain, single, and, of course, her favorite free-blooming double varieties.



[Guide photos]

Gracious grounds surround the stately mansion whose new name is a credit to the values of its pioneer builder and today's citizens who have given it a new name: Fairbank House Residential Adult Education Center.

by
GWEN LESLIE
Home Editor

A Living Monument

"HOW can we ever have unity if we send children to separatist schools?"

"If we all thought the same, there'd be no need for Folk Schools. But from discussing our differences, each one of us may get to know a new point of view."

"Unity needn't be sameness; it doesn't depend on or demand that. It does require a common goal though, I think."

A dozen rural Canadians had selected Canadian unity as the most important issue in the nation today. The group was a mixed one: men and women, parents, grandparents and maiden aunts. The time was evening. Just a few hours earlier these people had gathered, suitcase, bedding and notebook in hand. Some were strangers. Two were mother and son. Others had shared the family feeling of a Folk School experience before, in a house, a hotel, a motel, the education center of a church, or "on wheels." Together, they made up the second Folk School to be held in Fairbank House Residential Adult Education Center at Petrolia, Ont.

Why had they come?

To Ivy Allemang, R.R. 1, Galt, it was a question of being interested in order to be interesting. She said: "I like meeting people and seeing new country. The more you travel, the more interesting you are to other people."

Shirley Glass, a farm wife with a young family, had another reason: "At Folk School you learn more about other people and more about yourself."

"I have more respect for other people's opinions since coming to Folk Schools," Alice Cameron declared. "It's helped me to understand why they think what they do. I used to think if they didn't agree with me, they must be wrong."

Each of these reasons had a bearing on the topic under discussion, "The Challenges That Face Canada As We Approach the Centennial." With the help of speakers, resource leaders, films, and one another, the Folk Schoolers studied Canada's nationhood. This kind of topic and study program is one of the types of program planned in the new educational institution that is Fairbank House Residential Adult Education Center.

THE structure is sturdy, the ceilings high, and the woodwork in the 30 large rooms glows with the mellow patina borne of quality, age and care. No expense was spared to make it one of

the finest homes in Ontario at the time of its building in 1890. The money was well spent, but in 1964 costs pose a problem. Fairbank House is fighting for its life.

As a private home, Fairbank House is already dead. The builder's grandson, Charlie Fairbank, inherited it in 1956 and he frankly admits he cannot afford to live there. For several years he tried, in vain, to sell it. Demolition threatened the stately 3-storey showplace, built by an oil baron to lure his sophisticated wife to the site of his fortune. He had promised her a house that would be the cultural center of Lambton County. Its location in the center of the county is one factor in favor of their historic house. Its struggle today is for a new life dedicated to serving the citizens of Lambton as Fairbank House Residential Adult Education Center.

LAST year a dedicated group of citizens sponsored the rebirth of Fairbank House. It all began with Mrs. Grant Smith's dismay at the prospect that the building would be destroyed. In January of 1963 she sought opinions from people working in the field of adult education on the suitability of the house as a residential center. They agreed it was; and Mr. Fairbank agreed this



The sycamore for the reception area and stairway was cut from Fairbank farms in Lambton Co.

would be a use in keeping with the purposes for which the house was built.

"Next we had to ask key people in the community if they shared our feeling that such a center would fill a need," Mary Smith recalls. "Would it be used? Could it be financed?" In a meeting in the Petrolia town hall these people endorsed the project, and a second meeting was held 2 weeks later to interest Petrolia townspeople, farm people, representatives of industry, labor and business. The Canadian Association for Adult Education and the Community Programs Branch of the Ontario Department of Education were contacted. A core committee emerged, with Mrs. Smith as chairman.

In the weeks that followed, a 6-month lease was signed with Mr. Fairbank: the organization would have the use of Fairbank House and the furniture in it in return for payment of utilities, taxes, maintenance and normal repairs. A board of directors was established, officers elected, advisors and an advisory board set up, and a legal advisor obtained. Seven stages of development had been anticipated: the idea stage; organizational; promotional; operational; development; ownership; expansion. By the end of March, 1 year ago, the first two stages were past. In July, the granting of a provincial charter made Fairbank House a corporation without share capital.

Even the most enthusiastic of Fairbank House devoted workers were startled by the number of people who came to the open house held to announce the official May 1 opening of Fairbank House Residential Adult Education Center. An estimated crowd of 5,000 to 6,000 people were guided on tours through the house.

The success of the open house encouraged the Board of Directors to open Fairbank House for tours each Sunday from Dominion Day until Thanksgiving. Members of the organization guided guests through the house and explained the aims of Fairbank House. For the admission fee of \$1 visitors were given a membership in the organization as well. And the organization assembled a mailing list of persons who would be interested in the programming planned for Fairbank House.

Meanwhile, with the official opening May 1, and the arrival May 2 of delegates to the first residential conference, Fairbank House was launched into its fourth stage; it was operational.

And it still is, although financing causes its members some anxious hours. It was in January that I attended the second Folk School to take up residence in Fairbank House.

"YOU feel right at home here, don't you?" asked Betty Day. "You can't help it—this house casts a sort of spell!"

It's the sort of spell that confirms the faith Fairbank House volunteer workers have in the property and their vision of it as an ideal site for residential adult education. Certainly the atmosphere is admirably suited to the purpose of the Folk School movement: "To create situations in which people can secure greater understanding of themselves, their community and the world in which they live."

Mrs. Day was right, and proud to be so. She's second vice-president of the Fairbank House Board of Directors and draws on her experience in adult education as past president of the Ontario Folk School Council. And as a farm wife, she can speak for the advantages of residential surroundings for study groups, away from the demands of farm home family life.

Another farm wife and member of the Fairbank House Board of Directors, Mrs. David Brown of Brigden, puts it this way: "With Folk Schools we've found living together has been better for discussion. Otherwise it's just like a series of meetings—people coming and going and getting absorbed by all the other demands on their time and attention."

Already a monument to the history of oil in Lambton County, Fairbank House provided a fitting background to the topic of the Folk School I attended there.



Florence Edwards, resource leader Glyn Allen of the Canada Dept. of Citizenship and Immigration, and Isla Smith join in group discussion in the library.



Laura Carter, Ivy Allemang, Winnie Hall, resource leader Glen Hughes, G. H. Miller, special speaker Rev. Orlo Miller share comments on nation's history.

Folk School is no holiday from homely chores! Mary Smith, Fairbank House chairman, stacks dishes in leaded glass paned cupboard. Ralph Cameron and Shirley Glass pitch in on dish-drying.



Shirley Glass, Laura Carter and Ralph Cameron pause in preparation of the final day's diary report to accept Folk School cook Isla Smith's offer of apples.



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Every bowlful contains all the food energy, all the nourishment of 100% whole grain. None of the natural goodness is lost in processing!



To Buy an Easter Bonnet

by EDNA P. CARLTON

WOULD you like a new outfit this Easter? Most farm women would probably answer, "Of course I would. But by the time I've bought what the children need, there won't be enough money to spare."

Would you like to make a little extra money before Easter, earmarked just for you? Here are two ideas that really work. I know, because I've tried them both.

Some farm women go to market or have egg routes. If you like to bake, why not spend the day before you market in making some extra goodies? Many town women are glad of a chance to buy home-baked delicacies. At our last church supper I heard one of them say: "It takes the country cousins to cook!"

Homemade bread, plain rolls, Chelsea buns, chocolate squares, and doughnuts sell well. Peanut brittle is another item which can be made while you are in the kitchen, busy with other things, since it needs neither stirring nor beating. Put up in plastic bags, in one-quarter or one-half-pound lots, it is always popular. If you have extra jam, relish or pickles, they will sell well too.

"But I don't have an egg route, or go to market, so you are no help to me," you say. Perhaps I can be. After we stopped raising chickens, and I was at home with a small child, I tried to think of some other way to make that extra money. About six weeks before Easter I mailed notices to my neighbors that I would be making Hot Cross Buns and doughnuts each Friday. I would accept telephone orders until Thursday night. My customers could pick up their buns from noon until night on Friday. In this way I had no waste, since I baked only what was wanted. I was amazed at the response I had even from farm women, who usually do their own baking. That was because I chose to bake two things which are some trouble to make, but which can be made as easily in six-dozen lots as in dozen lots. Many women were glad to buy them instead of taking their valuable time to make the few they would want. I baked each week until Easter, had lots of fun seeing my "customers," and made some profit besides. I still have some people who phone before Easter to see if perhaps I'll be making Hot Cross Buns. "They

are so much better than the bought ones," they say.

You will not make a fortune, but you can make that extra money that many stay-at-home housewives long for.

Would you like to try my recipes as well as my ideas?

Perfect White Bread

2 pkg. active dry yeast
2 c. milk
2 c. water (water from boiled potatoes is good)
4 T. sugar
5 T. shortening, melted
4 tsp. salt
12 c. sifted bread flour

Scald milk, add water and cool to lukewarm. Add 1 tablespoon sugar. Stir well and sprinkle yeast over it. Let stand 10 minutes. Stir mixture well; add rest of sugar, salt and melted shortening. Beat in about 5 cups flour to form a smooth batter. Add rest of flour. Stir. Turn out on floured board, let "rest" 10 minutes. Knead until smooth and elastic. Put in a greased pan, turning to grease dough surface; cover and leave in a warm place to rise one hour. Turn out and knead, cover and let rise in greased pan for another hour. Turn out on board, cut in four equal pieces. Use rolling pin to roll into a rectangle about 1-inch thick; roll up like a jelly roll, fastening ends firmly. Place in greased loaf pan, let rise until double in bulk (about 1 hour), and bake about 45 minutes in a moderate oven at

375°F. or until golden on top and bottom. When cool, these loaves can be frozen in plastic bags, and will keep for months. When thawed, they taste as moist as freshly baked bread.

Hot Cross Buns (7 dozen)

4 c. milk
1 c. water
3 pkg. active dry yeast
2 T. salt
1½ c. sugar
1 c. shortening
4 eggs
3 c. raisins
Grated peel from 2 oranges, or ½ c. cut mixed peel
1 T. ground cinnamon
Bread flour to make very soft dough (14-15 cups, sifted)

Scald milk; add sugar, salt and raisins. Sprinkle yeast over lukewarm water into which 2 teaspoons of sugar have been dissolved. Let stand 10 minutes. Add beaten eggs, shortening and yeast to milk mixture, which is now lukewarm. Add about 6 cups sifted flour, beat until it forms a smooth sponge. Add rest of flour with cinnamon sifted into it. Turn out on floured board, let dough "rest" for 10 minutes. Knead until smooth. Let rise until double in bulk, probably 1½ to 2 hours. Shape into balls, flatten on greased pan. Make a cross on top with scissors or very sharp knife. Let rise in warm place until double in bulk, 1 to 1½ hours. Bake about 10 minutes in moderately hot oven at 375-400°F. until golden brown. While still warm, frost the cross with an icing made of confectioner's sugar mixed with water and



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ROYAL BANK

a little vanilla. These also freeze well if cooled and stored in plastic bags.

Quick Doughnuts

- | | |
|------------------------|-------------------------------------|
| 2 eggs | 1 T. salt |
| 1 1/3 c. sugar | Grated rind of 1 orange (optional) |
| 3 T. melted shortening | Fat for deep frying (1 - 1 1/2 lb.) |
| 1 c. buttermilk | Fine granulated sugar for dipping |
| 4 c. bread flour | doughnuts |
| 1 tsp. soda | |
| 1 tsp. baking powder | |
| 1 tsp. nutmeg, ground | |

Beat eggs well, add sugar and shortening, beat till creamy. Add buttermilk and mix. Add orange rind if desired. Add sifted dry ingredients. Stir in. Turn out on floured board. Let "rest" for 5 minutes. Roll out about 1/2" thick. Cut with a doughnut cutter. Fry in deep fat at about 370°F. Drain on paper towels. While warm, put in paper bag with fine sugar and shake to coat doughnuts with sugar. These freeze beautifully and keep in the freezer for months.

Peanut Brittle

- | | |
|-------------------------------------|-------------------|
| 2 lb. little salted Spanish peanuts | 1/4 c. corn syrup |
| 2 c. brown sugar | 1 1/4 c. water |
| 3 c. white sugar | 1 T. butter |
| | 1 tsp. vanilla |

Spread peanuts in 7 well-buttered pie plates. (Foil plates are fine.) Stir sugars, syrup and water together; cook over fairly hot heat. Do not stir once mixture comes to a boil. When it reaches the "hard crack" stage (310°F. on a candy thermometer, or when a little dropped into cold water from a spoon spins a thread that is so brittle it cracks), add butter and vanilla. Leave on heat until it bubbles up, but do not stir or it will go sugary. Pour a thin layer over the peanuts. When cold, break in pieces. Store in tightly-covered tins, so it will not get sticky.

Inexpensive Chocolate Squares

- | | |
|----------------------|-----------------------------|
| 1 c. sugar | 1 1/2 c. sifted bread flour |
| 1/4 c. shortening | 1 tsp baking powder |
| 1 egg | 5 T. cocoa |
| 1/2 c. boiling water | 1 tsp. salt |
| 3/4 c. buttermilk | |

Measure soft shortening into mixing bowl (not plastic). Pour sugar in; add unbeaten egg. Sift flour, baking powder and salt over other ingredients. Mix cocoa and soda and spoon over flour. Mix boiling water quickly with soda and cocoa mixture, add buttermilk quickly. Then beat all together until smooth. Pour into a greased 8" by 12" baking pan. Bake about 30 to 40 minutes in a moderately slow oven at 325°F. When nearly cool, cut in squares or fingers, ice on all sides with soft chocolate frosting, and roll in shredded coconut. Place on waxed paper until firm.

Soft Chocolate Frosting

- | | |
|--------------------|-----------------|
| 1 c. sugar | 4 T. cornstarch |
| 4 T. cocoa | 1 tsp. vanilla |
| 1 c. boiling water | 1 tsp. butter |

Stir and sift sugar, cocoa and cornstarch together. Gradually add boiling water, stirring well. Cook over direct heat, stirring all the time, until icing is thick and smooth, about 5 minutes. Taste, to be sure cornstarch is cooked. Then add butter and vanilla and stir well. While still lukewarm, spread a thin layer on squares of chocolate cake and dip in shredded coconut. A good filling and frosting for layer cake, it is economical and "never fail."

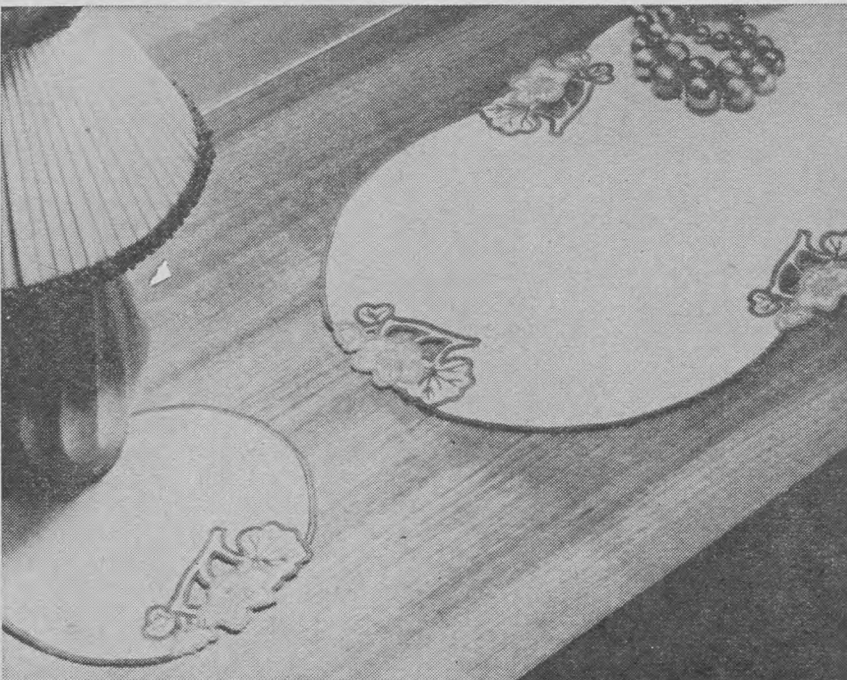
HANDICRAFTS

Decorative Stitchery

A knife, fork and spoon design trims a kitchen cushion and curtain set. Order Leaflet No. E-8544, 10¢, for full-size tracing diagram and chart.

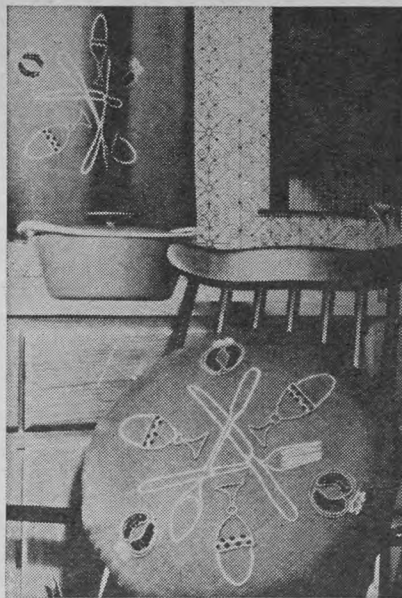


Order Leaflet No. E-7825, 10¢, for full-size tracing diagram keyed for color and the Stem, Satin, and Long and Short stitches used in an effective floral motif blouse trimming.



Stem, Buttonhole and Daisy stitches are used to work this attractive embroidered cheval set. Order Leaflet No. E-8222, 10¢, for tracing diagram.

For handicraft patterns pictured above please address your order to Country Guide Needlework Dept., 1760 Ellice Ave., Winnipeg 21, Man.



Leaflet No. E-8056, 10¢, gives diagramed instructions for a leaf motif applied to child's dress. Herringbone, Stem, Satin, French Knot and Back stitches are used in embroidery.



Lemon Juice Recipe Relieves Arthritic & Rheumatic Pain

If you suffer rheumatic, arthritis or neuritis pain, try this simple inexpensive recipe, that thousands are using. Get a can of RU-EX Compound, a 2 weeks supply, today. Mix it with a quart of water, add the juice of 5 lemons. It's easy! No trouble at all and pleasant. Take only 3 tablespoonfuls 2 times a day. Often relief is obtained. If the pains do not quickly leave and if you do not feel better, return the empty can to us and RU-EX will cost you nothing. You are the sole judge as RU-EX is sold on a money back guarantee. Over 8 million cans used. At all drug counters. Adrem Ltd., 281 Bartley Drive, Toronto 16.

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Exclusive Healing Substance Proven To Shrink Hemorrhoids And Repair Damaged Tissue.

A renowned research institute has found a unique healing substance with the ability to shrink hemorrhoids painlessly. It relieves itching and discomfort in minutes and speeds up healing of the injured, inflamed tissue.

In case after case, while gently relieving pain, actual reduction (shrinkage) took place.

Most important of all—results were so thorough that this improvement was maintained over a period of many months.

This was accomplished with a new healing substance (Bio-Dyne) which quickly helps heal injured cells and stimulates growth of new tissue.

Now Bio-Dyne is offered in ointment and suppository form called Preparation H. Ask for it at all drug stores—money back guarantee.

Now... feminine hygiene in a capsule!

Germicidal protection that starts instantly—lasts for hours

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Zonitors' "shield" of protection starts instantly, lasts for hours—protects, freshens, deodorizes. Individually wrapped. Available at your drug store in packages of 6, 12 and 24. Complete instructions included.



For fast relief from menstrual pain you can count on help from the 4 active ingredients in

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BANFF SCHOOL OF FINE ARTS
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Courses in: Music (including four week Jazz Workshop), Painting, Theatre Arts & Musical Theatre Crafts, Ballet, Figure Skating, Writing, Photography, French. For Calendar, write: **Director, Banff School of Fine Arts, Banff, Alberta.**

THE TRUTH ABOUT CORNS

is no secret these days. More and more people are discovering that corns can be safely, easily and quickly removed with the most modern treatment available, Blue Jay Corn Plasters. Blue Jay has developed an exclusive Phenylum medication that brings fast relief, with effective corn removal in as little as three days! And Blue Jay Corn Plasters come complete in one-step application, with three built-in advantages—Phenylum medication, soft felt cushion for relief of painful shoe pressure and Wet-Pruf adhesive tabs that stick and stay even in bathwater. Don't let corns take the fun out of going places. Buy a box of Blue Jay Corn Plasters, sold and recommended by druggists everywhere.



THE KENDALL COMPANY (CANADA) LIMITED BAUER & BLACK DIVISION



—Pierre

by BETTE STORIN

AN OPEN LETTER TO DRESS MANUFACTURERS EVERYWHERE:

This letter is in the nature of a "large-sized" complaint. Whatever happened to the size 16 dress? Even more to the point, what happened to the over-size 16 dress?

Could it be that your own personnel are composed entirely of thin midgets? Have your style scouts taken a good look at the average woman on the street lately? Have you forgotten the Stylish Stouts who, while they enjoy a daily consumption of bread, butter and fluffy mashed potatoes, also like to maintain a smart wardrobe in-between snacks?

You know, you are actually losing out on a very good thing here when you refuse to acknowledge us fat ladies. Yes, you are. We refuse to give up in our search for the stylish outfit by cramming our girth into a size 14 when we need an 18. Not us. We hie ourselves to the nearest yard goods counter, get our dress material, a pattern and latch onto a good dressmaker.

"Then," I can hear you sigh as you reach out for another size 9 pattern, "what's all this fuss about?"

I'll be frank. Women are born bargain hunters. You turn out a quantity of elegant lines. These cleverly smart dresses are sold to buyers of local dress shops in small towns all over the country. Soon the shops of, let us say, Top-Button, Ont., have received their merchandise from your factories. The Top-Button shops arrange a great summer bargain sale. Advertisements depict lovely models wearing the dresses featured in the great sale.

The following day Size Sixteens and Overs, flock to their local shops in the hope of picking up a stylish dress in the sale. What happens?

"What size did you say, Madam?" "Size 16, please."

The proprietor acquires a sad look. Her glasses quiver as she turns with

the fire and vigor of someone who has just received very bad news indeed! While she flips back the tags on the dress racks, wafer-thin women sail past Size Sixteen or Over, with dresses draped over their unpadded shoulders.

"Here's a pretty one." I usually forget myself at this juncture and reach for an attractive dress with slimming lines. "The shade is lovely!" "Not for you, I'm afraid," the proprietor says in a reproving manner. "It's only a . . . 9."

Size 9! I haven't worn a size 9 since I was age 9!

When the shop proprietor finally gets to the dresses which are my size, they are so few in number that it brings a catch to my throat as I see how they are squeezed to the very end of the racks by their more aggressive companions . . . the dainty size 9s!

Another question that irks me is: "Why don't you take the 14? We can let out the seams. No trouble at all."

I don't want my seams out. I want my full seam allowance. After all if Size Nine gets 1-inch seams for a certain price, I want them too.

I have another objection. Why do dress shop personnel call dresses "numbers"? I have no real complaint here as long as everyone remembers that after 14 and 15 we come to . . . 16 . . . and over!

Not so long ago I tugged on a size 14 dress. The dress had looked so stunning on the window model that I flipped my fins and swam into the shop!

"Lovely . . . charming! That dress is . . . you!" The proprietor held up her hands as if she had just stepped on a tack when I emerged from the undersized phone-booth the shop calls a "dressing room."

"Take a look in the full-length mirror. Now . . . tell me, doesn't that dress do something for you?"

I held my breath as I looked. "Yes

. . . it does," I agreed, "but I'd rather do without it."

Am I wrong in assuming that your factories are short of materials? Short of patterns? Are you short of larger models, maybe?

Then what about making a clean start? Swamp your plants with size 16 and over "numbers." Stock local shops with large sizes. Let us big gals feel the chiffons, the velvets, the silks and brocades. But best of all, let us hear the golden words: "Size 16? Madam . . . take your pick. We've an entire rack of them."

The Fireside

The glowing embers in the open grate
Inspire the fancy, call up bold new dreams;
Their dancing figures, too, can recreate
Fond memories within their golden beams.
I know few things more cozy than a hearth,
The cheery logs, the warmth that they exude.
Here in my chair, I'm lord of all the earth,
And petty thoughts dare not disturb my mood
Of restful peace and quiet reverie.
Then I get new perspective on the day
And place in proper balance what I see
And hear and feel and hope along the way.
I sense a harmony—and know my fears
Are swept away in music of the spheres.

—ROBERT J. CRANFORD.

Spring Song

Of all delights the seasons bring,
May apple blossoms in the spring
Entwine my heart like silken hair,
And leave their sweetest nectar there.
Like gentle rain, the petals fall,
A gay pink carpet over all,
But leave their hearts upon the tree
To later feed and nourish me.

—NANCY W. ASTON.

Measurement Chart

SUB-TEEN				
Size	85	105	125	145
Bust	28	29	31	33
Waist	23	24	25	26
Hip	31	32	34	36
Back Waist Length	13 1/2	13 3/4	14	14 1/4
YOUNG JUNIOR				
Size	9	11	13	
Bust	30 1/2	31 1/2	33	
Waist	23 1/2	24 1/2	25 1/2	
Hip	32 1/2	33 1/2	35	
Back Waist Length	14 7/8	15 1/8	15 3/4	
TEEN				
Size	10	12	14	16
Bust	30	32	34	36
Waist	24	25	26	28
Hip	32	34	36	38
Back Waist Length	14 3/4	15	15 1/4	15 1/2
GIRLS' SIZES				
Size	7	8	10	12
Bust	25	26	28	30
Waist	22 1/2	23	24	25
Hip	27	28	30	32 1/2
Base of neck to natural waistline	11	11 1/2	12 1/4	13
Skirt length from natural waistline at back	14	17	19 1/4	21 1/4
			23 1/4	

BLUE MONDAYS? YOU BET!

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Keeps colors bright, too!

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BACKACHE? ..not me!



For relief from backache or that tired-out feeling I depend on—



WOMEN PAST 21 WITH BLADDER IRRITATION

After 21 twice as many women as men are made miserable by common urinary irritation caused by a germ, Escherichia Coli. To quickly combat the secondary aches, muscular pains and disturbed sleep caused by Kidney and Bladder irritations, try taking an internal CYSTEX antiseptic bath for a few days. All you do is take 2 little CYSTEX tablets with a glass of water. In addition to its cleaning antiseptic action, CYSTEX is also an analgesic pain reliever for Rheumatic Pains, Headache, Backache, and muscular pains. Get CYSTEX from druggist. Feel better fast.

ASTHMA

Chronic BRONCHITIS DO YOU GASP FOR BREATH, WHEEZE and COUGH?

Are you kept awake, night after night, gasping for breath because of bronchial asthma, or by a stubborn cough that gives you no rest? Get quick, satisfactory, longed-for relief by taking TEMPLETON'S RAZ-MAH Capsules—easy to swallow, fast and effective in action. Get RAZ-MAH GREYS 85¢ and \$1.65 at all drug counters.

MOTHERS For children's Bronchial Asthma and Bronchitis use RAZ-MAH GREYS Juniors, 50¢ V-53A

IF THE CLOTHES you sew are to look their best, they must fit well. Today's many pattern sizes offer various combinations of measurements and so make your fitting job easier. With a tape measure, check the measurements you are sewing for; then match them to the most suitable pattern sizing.

The figure types in pattern sizes vary in contour and proportion. Girls' sizes 7 to 14 are proportioned for the flat, undeveloped figure, anticipating a height of 5' in size 14. Sub-teen fittings are designed for the figure that is beginning to develop slightly, anticipating a height of 5'1" in size 14S.

The Young Junior pattern is proportioned for the young, high-bosomed figure that is slightly taller and slightly longer-waisted than the Teen. Young Junior sizes allow for a height of about 5'5" in size 13. The Teen pattern is designed for the high-bosomed figure, more developed and taller than the Sub-teen. Teen sizes feature a slightly larger waist and hip, and narrow, sloping shoulders. They allow for a height of about 5'3" in size 14.

To select the best size for your needs in the patterns below, refer to the measurement chart on page 80.

THE GIRLS' TURTLE TOP

Pattern includes:

- 1 The Turtle Top
- 2 The Turtle Top Coordinates
- 3 The Turtle Top & Jumper
- 4 The Turtle Top Separates
- 5 The Turtle Top and Skirt
- 6 The Turtle Top for Sports

2988
Girls' sizes
7-14

1



2988

2



3



4



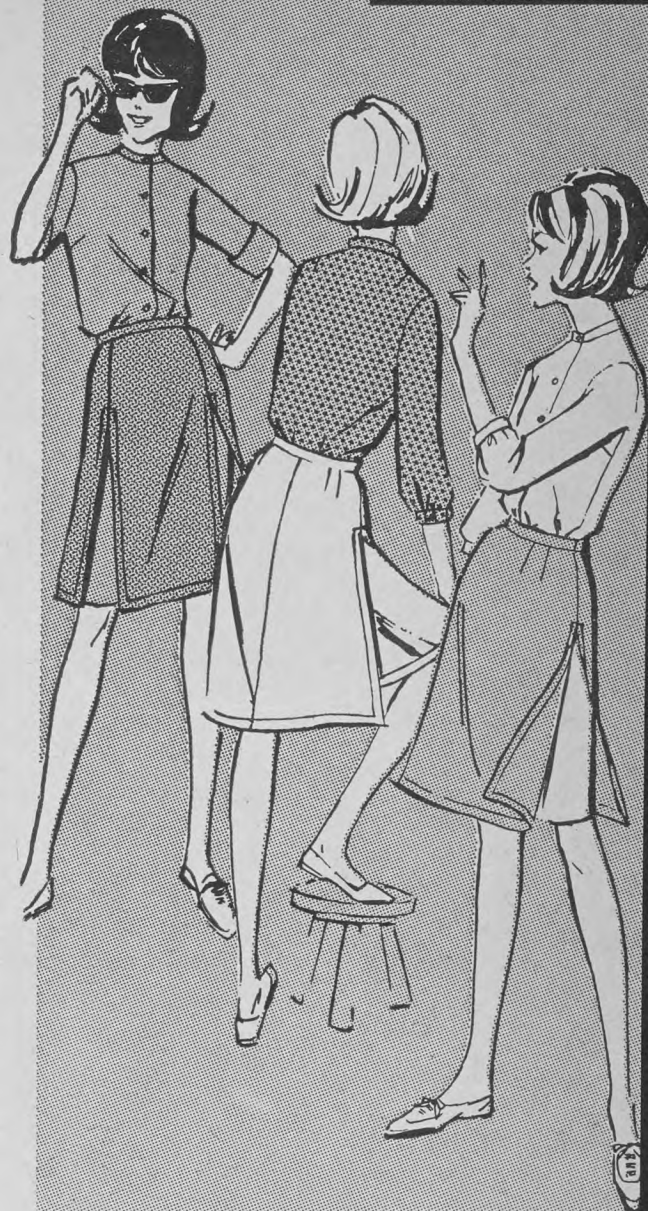
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6



PATTERNS



proportioned for
teens

No. 3016. A band-collared blouse with buttoned front and choice of roll-up or $\frac{3}{4}$ sleeves tops a pants and skirt combination called a pirt. Top-stitching trims pirt hem, splits. Sub-teen 8S, 10S, 12S, 14S; Young Jr. 9, 11, 13; Teen 10, 12, 14, 16; 60¢.

Country Guide Pattern Department

1760 Ellice Ave., Box 4001, Terminal "A",
Winnipeg 21, Man. Toronto, Ont.
(No. C.O.D. orders, please)

Please send Butterick

Pattern No. _____ Size _____ Price _____

Pattern No. _____ Size _____ Price _____

To _____

No. 2988. This one-pattern wardrobe illustrates the versatility of a turtle-necked girls' blouse sewn with long or $\frac{3}{4}$ -length sleeves. Hooks and eyes secure back neckline closing. A back-buttoned sleeveless overblouse, and A-line skirt pleated in center front and back, a back-buttoned semi-fitted A-line jumper, and long pants are also included. Girls' sizes 7, 8, 10, 12, 14; 70¢.



[Campbell Soup photo]

A seasoned soup sauce creams Chicken and Sprouts.

Mouth-watering Chicken Dishes

*Feel just like a spring chicken?
Treat your family to one of the wonder-
ful ways with chicken described below*

by **GWEN LESLIE**
Food Editor

THE good life has been described as "a chicken in every pot." Certainly chicken is one of the good things we eat; it looks, smells and tastes delicious! Happily, it's just as good for us as it looks. Chicken is an important source of protein (second only to turkey) and a good source of riboflavin. It's low in fat content and it's good value all around, when you compare the nutrients and cost per pound of edible meat with other meats.

Chicken's tender texture and mild flavor permit an almost endless variety in preparation and combination with other foods and flavors. We gathered some recipe suggestions for your chicken-eating pleasure. If you don't already have a copy, you might like to add to these the recipes in a 48-page booklet prepared by the Poultry Products Institute of Canada. Called "Cooking Canada's Chicken," it is available free from Poultry Products Institute, Box 21, Station K, Toronto 12, Ont.

Chicken and Sprouts

- 2 chicken breasts, 10-oz. can cream split (about 1½ of chicken soup lb.)
- ½ c. water
- 2 T. shortening
- ½ tsp. dill weed, crushed
- 5-oz. can sliced mushrooms, drained
- 10-oz. pkg. frozen Brussels sprouts

Brown chicken in hot shortening in frying pan. Add mushrooms and brown lightly. Pour off excess drippings; stir in soup and water. Cover and cook over low heat for 30 minutes. Add dill and Brussels sprouts. Cover and cook 30 minutes more, or until tender. Stir occasionally. Yields 4 servings.

Layered Chicken Pie

- Dough:**
- 4 c. sifted all-purpose flour
 - 1 tsp. salt
 - 4 tsp. baking powder
 - ¾ c. shortening
 - Water

Sift flour, baking powder, and seasonings into bowl. Cut in shortening with pastry blender or two knives, as you would for pastry. Add just enough water to hold dough together.

Take a little more than ⅓ of the dough and roll it out about ¼" thick.

Covering sides and bottom, fit into a greased 2-qt. oblong casserole with tight-fitting lid.

Filling:

- 3 lb. chicken, cut up
- 2 T. chopped celery leaves
- 6 to 8 sliced green onions
- Seasonings to taste: salt, pepper, thyme, savory, parsley, marjoram
- Boiling water
- 1 c. milk

Arrange half of cut-up chicken (pieces cut smaller than usual and boned if desired) on the dough in the casserole. Top with half the onion, parsley and celery leaves and sprinkle with salt, pepper, crumbled thyme, savory and marjoram.

Divide remaining dough in 2 parts. Roll one out to ¼" thickness, make 3 long slits in center, and fit over chicken layer. Repeat layer of chicken and seasonings, and top with remaining dough, rolled and slit. Now you have 3 layers of dough and 2 of chicken.

Pour boiling water over the pie until it shows at the sides, enough water to almost cover. Place lid tightly on casserole and bake for 25 minutes in a hot oven preheated to 450°F. Reduce oven temperature to 325°F. and bake for 2½ hours. Remove lid, and pour 1 cup milk over the crust. Recover casserole and bake 15 minutes, then remove cover and bake uncovered for another 15 minutes.

This recipe produces a crispy-brown crust over chicken pieces cooked tender in a thick, flavor-rich sauce. When cold, the pie jells and may be sliced. If desired, the pie may be reheated a second time by following the directions for the final half hour of cooking, adding only about ½ cup of milk or water.

Western-Style Barbecue Chicken

- 2 frying chickens, cut in quarters
- ½ tsp. black pepper
- Shortening
- 1 tsp. chili powder
- Flour
- 1 c. chopped onion
- ¾ c. catsup
- 2 T. vinegar
- ¾ c. water
- 2 T. Worcestershire sauce
- ½ c. chopped green pepper
- ⅓ tsp. red pepper

Wash chicken quarters and dry. Roll in flour to coat well; shake off excess flour. Melt ½ cup shortening in a frying pan. Brown chicken pieces on both

sides. Combine onions with remaining ingredients and pour over chicken. Cover and cook slowly for 30 to 40 minutes, or until tender. Remove cover and cook another 10 minutes. Serve hot. Yields 8 servings.

French-Fried Chicken Breasts

- 4 single chicken breasts
- Salt
- 1 c. ice-cold water
- 1¼ c. sifted all-purpose flour
- Vegetable oil or shortening for deep-frying
- 2 tsp. baking powder

If desired, bone the chicken breasts or have butcher do it. Wash and dry chicken pieces and sprinkle lightly with salt. Let stand until chicken comes to room temperature.

Meanwhile, sift the sifted measured flour, baking powder and ½ teaspoon salt together into a bowl. Gradually stir in ice-cold water and beat with a rotary hand beater, until batter is smooth. Cover and let stand for ½ hour.

Preheat fat for deep-frying to 300°F.

Dip chicken pieces in the batter to coat evenly; cook slowly in preheated fat, turning occasionally, until chicken is tender and coating is golden—15 to 20 minutes for boned chicken, 25 to 30 minutes for chicken with the bone

in. Drain on absorbent paper and serve hot with a garnish of jelly and parsley.

Chicken Kiev

- 3 chicken breasts
- Pepper
- ¼ lb. butter
- 1 egg, slightly beaten
- 1 garlic clove
- 2 T. milk
- 2 T. sliced green onions
- 2 T. milk
- 2 T. snipped parsley
- 1 c. fine dry bread crumbs
- Salt

Have your butcher skin and bone the chicken breasts. Cut butter into fingers 2½" by ½". Freeze butter for several hours.

Cut chicken pieces in half. Place on waxed paper, smooth side down (the side from which skin was removed). Cover with another sheet of waxed paper and beat with a wooden mallet until chicken is very thin, being careful not to make any holes in the meat. Remove waxed paper from top of chicken pieces. Cut garlic clove in half and rub cut sides well into chicken. Sprinkle chicken pieces with chopped onion, parsley, salt and pepper. Place a frozen butter finger in the center of each piece of chicken. Roll chicken carefully so that entire piece of butter is covered; fasten with small skewers or toothpicks.



[Martha Logan photo]

Impatient for the cook-out season? Preview it with a Western-style Barbecue.

Combine egg and milk. Dust each chicken roll with flour, dip in egg-milk mixture and roll in dry bread crumbs. Chill until very cold. Fry in hot, deep fat preheated to 375°F. for about 8 to 10 minutes, or until golden brown. Serve very hot. Yields 3 servings.

Note: Chicken boning is easier after back has been broken. Bones and skin may be used to prepare a chicken broth.

Corn-Crisped Chicken

2½ to 3 lb. frying 1 tsp. salt
chicken, cut in ¼ tsp. pepper
pieces 1 c. corn flake
½ c. evaporated crumbs
milk

Preheat oven to a moderate temperature of 350°F.

Dip chicken pieces in undiluted evaporated milk, then roll in a mixture of salt, pepper and fine corn flake crumbs. Arrange chicken pieces, skin side up, in a shallow baking pan lined with aluminum foil. Do not crowd. Bake in a preheated moderate oven at 350°F. about 1 hour, or until drumstick is tender to a fork. Cover lightly with foil if a less crisp crust is desired. No watching, no turning, no pan to wash! Yields 4 or more servings.

Variations:

Epicurean: Omit pepper. Combine ¼ teaspoon each of thyme, paprika, and curry powder with corn flake crumbs and salt.

Italian: Combine ¼ teaspoon crushed oregano, ¼ teaspoon garlic salt and ½ teaspoon paprika with seasoned corn flake crumbs.

Parmesan: Combine ½ cup grated Parmesan cheese with seasoned corn flake crumbs.

Sesame Seeds: Combine 2 tablespoons sesame seeds with seasoned corn flake crumbs.

Sesame Baked Chicken

1 chicken, cut up 2 tsp. salt
for frying 2 tsp. paprika
1 egg, beaten ¼ tsp. pepper
½ c. milk ¼ c. chopped nuts
1 c. flour 2 T. sesame seeds
1 tsp. baking ½ c. butter
powder

Dip chicken pieces into egg and milk mixture, then into a mixture of flour, baking powder, salt, paprika, pepper, nuts and sesame seeds. Melt butter in a shallow baking pan in a hot oven at 400°F. Remove baking pan from oven. Place floured chicken pieces in a single layer in the baking pan, turning to coat with butter. Bake chicken skin side down for 30 minutes at 400°F. Turn chicken and bake another 30 minutes, or until tender. If chicken cannot be served at once, reduce oven heat and brush with more melted butter. Yields 4 servings.

Chicken Neapolitan

1 chicken, cut up 6-oz. can tomato
for frying paste
½ c. flour 5-oz. can
½ tsp. garlic mushrooms
powder ½ c. chopped
½ tsp. oregano green pepper
2 T. butter ½ c. grated
¾ c. water Romano cheese

Combine flour, garlic powder and oregano. Dip chicken pieces into flour mixture. Melt butter in a shallow pan while you preheat oven to 400°F. Remove baking pan from oven. Place pieces of floured chicken in pan, turning to coat with butter. Bake in a single layer, skin side down for 30 minutes in a hot oven at 400°F.

Combine tomato paste, water, mushrooms with liquid, and green pepper. Turn chicken skin side up in a single layer. Pour tomato sauce over chicken

and bake another 30 minutes, or until chicken is tender. About 5 minutes before the end of the baking time, sprinkle cheese over chicken pieces. Yields about 6 servings.

Individual Chicken Pies

3 lb. chicken, 3 medium-sized
drawn weight potatoes
2 tsp. salt 3 medium-sized
1 tsp. monosodium glutamate, ¼ c. flour
optional ¼ tsp. ground
1 tsp. sugar mace
1 sliced onion ¼ c. soft butter
1 stalk celery, 1½ c. milk
cut up ¾ c. cooked green
1 bay leaf peas
6 c. boiling water

Wash and cut up chicken; place pieces in a large kettle. Add salt, monosodium glutamate, sugar, sliced onion, celery, bay leaf and boiling water. Cover and simmer until chicken is just tender. Cool. Cut chicken into 1" cubes, discarding skin and bones. Skim and strain chicken stock.

Peel and cut potatoes into cubes. Peel carrots and slice them. Cook vegetables in 3 cups of the chicken stock, covered, until just tender.

Preheat oven to a hot temperature of 400°F.

Blend the ¼ cup flour and mace into the ¼ cup soft butter. Stir in a little of the milk, then stir it and the remaining milk into the vegetables and stock. Cook, stirring constantly, until the sauce thickens and comes to the boil. Add peas and cut-up chicken. Divide the solids among 8 large individual baking dishes; add sauce to cover. Arrange on a baking sheet and place in the preheated oven while you prepare the biscuit topping.

Biscuit Topping

1¾ c. sifted all-purpose flour 2 T. chopped
¾ tsp. baking parsley
powder 1 egg, well
¾ tsp. salt beaten
⅓ c. butter ½ c. milk
(about)

Sift the measured sifted flour, baking powder and salt together into a mixing bowl. Cut butter in finely; mix in parsley. Combine well-beaten egg and milk. Make a well in the dry ingredients and add liquids. Mix lightly, adding a little more milk, if necessary to make a soft dough. Turn out on a lightly-floured board or canvas and knead 10 seconds. Roll out to ¼" thickness and cut into shapes to fit the individual baking dishes. Cut a doughnut hole in each piece of dough to allow steam to escape. Seal dough to edges of each baking dish, and bake in a preheated oven at 400°F. for 15 to 20 minutes.

Chicken Livers, Chinese Style

2 eggs ½ c. celery, sliced
½ T. butter diagonally
¼ c. butter or ½ c. green pepper,
vegetable oil cut in strips
½ lb. mushrooms, 1 clove garlic,
sliced crushed
1 c. onions, cut in 1 lb. chicken
strips livers, cut in
1 T. soy sauce quarters

Beat eggs slightly and cook in a small pan with ½ tablespoon butter. Turn out on a cutting board to cool. Heat the ¼ cup butter in a large frying pan and saute vegetables with garlic until limp (about 7 minutes). Remove from pan and add the quartered chicken livers; brown quickly for about 5 minutes. Remove livers and scrape the pan. Cut the cooled, cooked egg into thin strips.

Just before serving, combine the vegetables, livers and soy sauce in the frying pan. Garnish with egg strips and heat for 2 minutes. Serve hot. Yields 4 servings

An all-round family favourite

cinnamon spice breakfast cake



Sift together, then set aside.....4 cups pre-sifted all purpose flour
½ tsp. cinnamon
½ tsp. nutmeg
⅛ tsp. powdered cloves

Scald.....¾ cup milk
Stir in.....6 tbsp. Blue Bonnet Margarine or butter
½ cup granulated sugar
1½ tsps. salt

Cool to lukewarm. Meantime, measure into bowl.....½ cup lukewarm water
Stir in.....2 tsps. granulated sugar
Sprinkle with contents of....2 envelopes Fleischmann's Fast-Rising Dry Yeast

Let stand 10 minutes. THEN stir well. Stir in lukewarm milk mixture.
Stir in.....1 egg and 1 egg yolk, well-beaten
2 cups of the spiced flour

Beat until smooth. Stir in remaining 2 cups spiced flour and, if needed, enough pre-sifted all purpose flour, (about ½ cup), to make a soft dough. Turn out dough on lightly floured board or canvas. Knead until smooth and elastic. Place in greased bowl; brush top with soft margarine or butter.

Cover. Let rise in warm place, free from draft, until doubled in bulk—about 1½ hours. Punch down dough; turn out on lightly floured board or canvas. Shape into an 18-inch roll; cut with sharp knife into 12, 1½-inch pieces. Form into round balls; place side by side in greased 7 x 11-inch pan. Brush top with soft margarine or butter. Cover. Let rise in warm place, free from draft, until doubled in bulk—about 1 hour.

Beatuntilfoamy1 egg white
1 tbsp. cold water
Brush over risen dough. Sprinkle with mixture of...¾ cup firmly-packed brown sugar
1 tbsp. pre-sifted all purpose flour
1 tsp. cinnamon
1 tbsp. Blue Bonnet Margarine or butter, melted

Bake in preheated moderately hot oven (375°F.), 40 to 45 minutes. If glass ovenware is used, reduce oven temperature to 350°F.



When you bake at home use Fleischmann's and be sure

Planning My Garden

by BETTY HUSSEY

I OFTEN wonder what mail carriers think when the annual avalanche of seed catalogs appears in the dead of winter. They must know what is inside, for if the covers aren't open, the envelopes have return addresses in huge letters.

Our seed catalogs seem to arrive (God bless them) on the coldest, snowiest, most miserable days of winter—days when I rather defiantly bundle up in boots, scarf and parka for the walk to the mail-box. Muttering uncomplimentary things about the season, I plow through snow to my knees, icy wind stinging my nostrils, blowing snow filling in my tracks almost as fast as I make them, wondering why I don't move to Arizona, or at least why I didn't leave the mail for my husband or daughters to pick up on their way home. Then I reach into the mail-box for a seed catalog! Forgotten are icy feet, cold nose and numb fingers. I make the trip back to the house in record time, throw off my outdoor gear, and settle down to enjoy the luxury of planning my new garden.

Planning a garden is at least half the fun of having one and I can be as lavish as I choose in my selections. However, when I finally send my order away, it's much more conservative than my original planning. These first catalogs make me forget that snow is piling up, or that it's zero outside. Instead I feel the warm sun on my back as I firm the soil over the seeds, or the dew on my feet as I steal out early on a spring morning to see what has poked through the ground during the night.

Some gardeners pick a pack of radishes, one of lettuce, another of carrots and so on. They give little thought to the variety. They are duty gardeners; they have a garden because it beats buying vegetables, or because their neighbors have one. And there's my kind—we're bewitched by gardening. I don't claim to have a green thumb. I have neither luck nor patience with houseplants but my garden gets lots of T.L.C. (tender loving care). I've always been lucky to have good garden soil enriched with fertilizer right from the barnyard. I like a liquid fertilizer, high in phosphorus, for all transplanting and for backward plants that need something extra.

I start most of my early peppers, cabbage and tomatoes and early-blooming flowers in a homemade hotbed my husband fashioned for me. It's nothing elaborate but it serves my purpose. Late April or early May is early enough in our district, depending on the weather. I plant main crop items directly into the garden and transplant from there when they are large enough.

TO get back to planning my garden . . . I take advantage of the information in the seed catalog. Listed beside the variety you will find the number of days it takes for certain vegetables to mature, which varieties

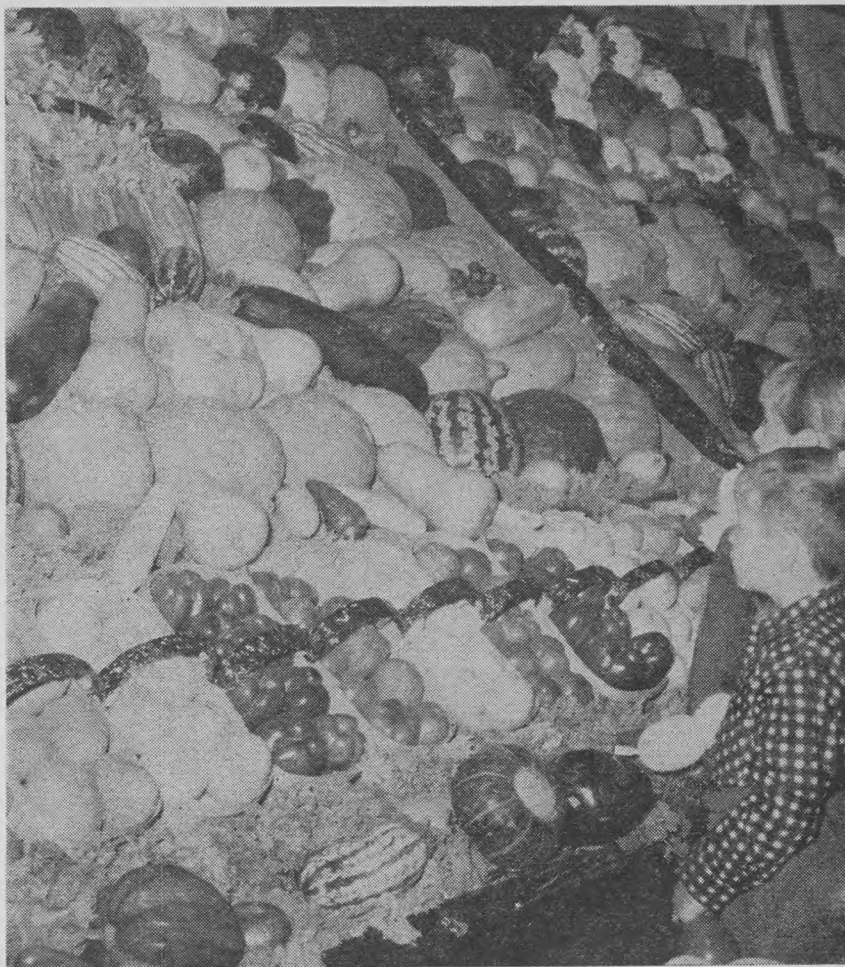
are best for freezing, which are early or late, how tall flowers can be expected to grow and when they bloom. This information is helpful to new gardeners and it is invaluable even to an old hand like me. It tells me not to plant zinnias that will grow 2 feet tall in front of a dwarf type. It also tells me the variety to plant so I can have early beets and late beets, which are new varieties and which are the old tried and true ones.

When you choose flower seeds from the rack in a hardware store, you invariably find mixed color packets. You can buy separate or mixed colors from a seed catalog. If you have a yen for a bed of mauve zinnias with a yellow border, you can order just those two colors. You can get yellow asters, or brilliant red ones, asters on long stems or base-branching that can be cut as a bouquet with just one stem. If you like showy blooms that last until the ground freezes, be sure to plant calendulas, scabiosa and snapdragons. It takes a hard frost to discourage them. Last year, our first cold weather and snow arrived in late November but I discovered two lovely red scabiosa still waving their heads above the snow.

While I thoroughly enjoy flowers, vegetables are my real forte and I really experiment with them. I always keep a sort of record of what I grew last year for comparison. Always ready to try something new, I continue to grow varieties that prove satisfactory until I find better ones. Last year I tried a new green bean, recommended for freezing, called Executive. I got an excellent crop all through August. Then one morning in early October, I discovered they were set with a new crop of beans. It may have been last year's unusual growing season but you can be sure I'll try them again this year.

Did you know there is a beet called Cylindra that grows long like a carrot? About two inches in diameter, and some 5 inches long, this variety is nice for beet pickles. If you like a really green cabbage, try Early Greenball. An early variety, it forms a small solid head with little core, and keeps its delicate green color when cooked. Bonanza is a good mid-season variety with solid heads that do not split. For a kraut cabbage, try Glory of Enkhuizen.

You can get a Scarlet Nantes strain of carrot called Strong Top. It is recommended for heavy soils because the tops do not break off when they are pulled. And you can buy hybrid sweet corn in a mix that enables the gardener with a small space to have corn over a longer period of time. If space is not a problem, you can purchase a hybrid collection of five different varieties, packaged separately. You plant it all at the one time, but it matures over a period of about 4 weeks. If you grow sweet corn for freezing,



Planning a garden is more than half the fun of having one but do make your seed selections on the basis of your particular soil and climate. [Guide photo]

Sugar King with its big 14- to 16-rowed ears is a good choice.

If you're tired of false blossoms on cucumbers, grow Spartan Blend. An early cucumber with mostly female blossoms, it is an excellent pickling variety.

A luscious lettuce, new last year, is aptly named Buttercrunch. It's delicious, sweet, tender and crisp. It keeps its sweet flavor in hot weather, and is perfect for salads. Have you given up growing peas because you couldn't get them in early enough? Peas tend to burn up in hot weather. I can highly praise the Wando variety. It's not available at all seed houses but worth looking for. Its dwarf vines withstand hot, dry weather. Last year, I didn't plant peas until the first of June. The following 5 weeks were hotter and drier than I can ever remember. Yet we picked peas throughout August on into mid-September and got the best yield we've ever had.

You can purchase potato eyes at about 75¢ for 30 eyes. In good soil these will produce around 100 lb. of potatoes. If blight has been a problem, Kennebec is a good variety to try.

I start tomatoes in a hotbed. For canning or juice there is no sweeter or juicier tomato than Campbell's 135 variety, which is available to the public. If acid is a problem in your diet, there are such varieties as the pear-shaped Roma, or the pink Ponderosa. Both have a low acid content.

WHILE many gardening books are available, none of them can compare with your own experiences with your own soil, climate and taste. I well remember when we moved from a sandy area to one with a heavy clay loam. The first year I firmed the soil around the seeds as I had done in the sandy soil. Some seeds just gave up trying to come up because of the cement-like top on them.

In our heavier soil, I couldn't do the necessary cultivating without my 2½ hp. garden tiller, and even with it there is plenty of hoeing and weeding to be done. As a youngster I remembered I loved to weed the garden, while brothers and sisters grumbled about it, so I guess I was born with this love of it. My husband has always insisted that if I had 2 acres of space for gardening it wouldn't be enough to suit me and he may be right.

As our family gets smaller and I get older, I'm sure I'll grow less garden, but right now I make more than enough to pay for my seeds, insecticides and so on, by exhibiting at our local fair and selling the surplus. I also give much of it away and still have a freezer full of garden-fresh vegetables. As for the work involved, it's a labor of love, for which I expect no pay. I wouldn't want to part with my seed catalogs though. They not only help me in the garden—they are the proof I need that spring is just around the corner.

At the University of Manitoba's annual Conference Week farm women discovered that figures can be fun

Account Books Need Not Be Baffling

by **ELVA FLETCHER**

Home Editor



A short course in farm accounting drew a classroom of homemakers from rural Manitoba. The instructor was M. B. Devlin of the University staff.

FOR better or worse, the man said. And he was talking to the farm wife who, unlike her city sister, is right in the middle of the farm business. She's the person who takes the telephone calls, drives into town for parts and repairs, helps out in harvest time. She's very much a partner in the farm business . . . for better or worse.

The man was M. B. Devlin, research assistant of the Department of Agricultural Economics and Farm Management in the University of Manitoba's Faculty of Agriculture and Home Economics. And he was talking to a classroom of farm women in town for the Faculty's annual Conference Week, there to learn how they could help with the farm accounting. Some of them were already much involved in their farms' accounting systems; for others it was their first venture into a whole new world—of inventory, capital losses, capital gains, of straight line and reducing balance methods of calculating depreciation.

The farm business, Mr. Devlin pointed out, had long since outgrown the old shoebox method of farm accounting. Today's farmers faced an increasing volume of business as their operations grew; price margins for their produce were decreasing; and there was the yearly visit of vigilant tax collectors.

He emphasized the fact that well-kept farm records provided a record of performance on the whole farm and for different parts of the farm operation. Even as Gwen Parker of Ste. Agathe concentrated on learning something about farm accounting, her husband, Lorne, was presenting a detailed analysis of 8 years of crop production on their Riverdale Farm to a session on roughages and cereals in livestock production. In Lorne's analysis were the statistics that would reflect in long-range farm planning. Mr. Devlin gave them other reasons for good farm accounts. Such records are useful in current operations. They provide a continuous check on farm income and expenses. Often they will help a farmer to cut losses on an unprofitable enterprise, or show him that it's time to take advantage of a particular market situation.

Basic information for budgeting and planning can be drawn from accurate farm records. The same records give information on crop yields, livestock production, capital and labor require-

ments. And if a farmer is thinking of a new enterprise, he will have some figures to help him determine its potential income before he makes any commitments.

There are other benefits: good records are useful in the distribution of income between landlord and tenant; when a farmer seeks credit; in meeting the terms of father-and-son agreements; in settling farm estates. And they certainly ease the preparation of income tax statements.

Mr. Devlin put special emphasis on the need for good farm records to simplify the preparation of income tax statements. "We are required to pay income tax," he said, "but we aren't required to overpay. But it's the farmer's responsibility to provide proof of expenditures whether they are large or small. It's often the small purchases that are forgotten." There's another advantage: accurate records tend to make a farmer cost-conscious and help him to classify his costs.

HAVING explained why farm accounts are important, Mr. Devlin went on to outline the most simple method of keeping these accounts: the single entry account of seven sections — inventory, current financial transactions (receipts and disbursements), household expenses, cash balance or cash summary, summary of annual earnings, records of farm production, analysis.

Make your inventory first of all, he suggested to the "beginning" accountants, as of the beginning of the year. This inventory should include a fair valuation of all land, buildings, machinery and equipment, livestock, grain, feed and supplies. It should allow for depreciation of machinery and buildings, include accounts payable and accounts receivable, personal assets in the form of cash, bank account, shares, stocks and bonds, the cash surrender value of life insurance and any other non-farm investments. This inventory, supplemented by the year's records and related to the end-of-year inventory will make up the farm's Net Worth Statement. It shows changes in net worth from year to year; indicates how capital is distributed among the various parts of the total farm capital; and the ratio of assets to debt.

Enter current expenses and receipts in detail, Mr. Devlin suggested. Group them in such a way that they can easily be analyzed when income

tax time rolls around. Don't overlook household and personal expenses — these are extremely important to the farm operation and are often overlooked. With these details it's a simple matter to calculate a cash balance.

The ladies learned that a cash or trial balance is necessary to check the accuracy of the year's business transactions. It works like a household budget. Incoming cash plus cash on hand or in the bank at the beginning of the year should equal all outgoing cash plus cash on hand or in the bank at the end of the year. It's another way to learn if any income or expense items have been omitted.

For the summary of annual earnings they would need to assemble all expenses and all receipts for the year, combine these with the change in the value of the inventories and be able to come up with the net farm income or the amount of money available for personal living, savings and any expansion of the farm operation.

Records of production, they found out, were an essential part of good farm accounting. These records showed the use made of land, labor and feed, of crop and livestock production in bushels and in the number of animals. At this point they learned that such expenses as taxes, building and machinery costs, should be allocated to the different parts of the farm operation on the basis of the acres in use, hours of use, barn space occupied and so on.

With accurate records farmers have the statistics they need for analyzing the farm business. They know the costs and return for each acre of land, and each animal; production output in terms of labor input; and equipment costs for each unit of land or product. These are the sort of statistics that help a farmer to pinpoint any weaknesses in his farm operation or to emphasize the features that give the best returns.

Finally, page by page, entry by entry, Mr. Devlin led the ladies through the Farm Account book that was developed by prairie universities and provincial departments of agriculture with the help of some 500 farmers in Manitoba, Saskatchewan and Alberta. Who knows! Perhaps the farm account book may yet find a place on the kitchen bookshelf beside the homemaker's favorite cookbook.

When you write a

Letter of Sympathy

by ELEANOR REESOR

EVERYONE likes to receive letters but hardly anyone likes to write them. Undoubtedly, the most difficult letters of all to write are letters of sympathy.

When we first learn of the personal misfortunes, financial reverses, or the deaths of loved friends, we feel sympathetic and wish we could do something to help. But instead of picking up our pens when our compassion is greatest, we sometimes hide behind a dozen excuses as to why we haven't the time to write that day. Usually our dislike of writing sympathy letters originates in our fear that we don't know "what to say" to the sorrowing ones.

However, if we realize just how important such messages are to people we won't put off until tomorrow the sympathy letter that we should write today. However well-written such letters may be, they lose some of their warmth and original purpose if they are delayed. Why not write when our hearts can guide our pens?

Letters of sympathy should be handwritten in ink, never typed. Typewriters belong to the business world. Just as we should not mix business with social matters in a letter, so we should choose appropriate stationery. The best choice is single sheets (8" x 10"), folded sheets or personal stationery with your name and home address or monogram engraved or printed on it.

Write only on one side of formal stationery and don't forget to number your pages for the convenience of your reader. The best colors in formal stationery are such shades as white, cream, beige or light gray. Make sure your notepaper and envelope match. In ink colors, stick to traditional blues and blacks; never use green, red, brown or purple ink for any kind of sympathy letter.

Illness and Accidents

When you write to a person who is ill or convalescing, try to convey the idea that everything will be all right . . . that he or she is well on the road to recovery. Sick people are often depressed and respond to a cheerful message.

Play down the seriousness of the illness, operation or accident. Avoid dwelling upon or seeking a lot of morbid details. And, for goodness sake, don't burden the patient with a running recital of your own operations, present health or family problems. Above all, don't mention a friend or relative who died with the same disease.

Sick people want and need to receive letters of sympathetic understanding and good cheer; they need and want to be entertained and sustained, encouraged and comforted. By all means, express your sorrow or concern upon hearing about the patient's misfortune but also make

both your sympathy and good wishes for a rapid recovery known.

Those not seriously ill will enjoy receiving amusing "Get Well" cards or short personal notes in a cheerful vein. Time tends to pass very slowly for sick people, so try to write often. Send them hasty-notes, greeting cards, postcards, even jokes or cartoons, or bits of poetry clipped from the daily newspapers or popular magazine . . . anything that you think will amuse or interest them. Actually any form of communication is appreciated because it tells the patient someone is thinking about him . . . missing his presence either at home or at work . . . and wishing him well. Such expressions of affection and esteem are essential to the happiness and high morale of most patients.

The Seriously Ill

Only the insensitive would write joking letters or send comical cards to those who are seriously or critically ill. For this reason, it's wise to check on the patient's condition and frame of mind with doctor, nurse, or a member of the immediate family before writing. Very often, such patients are really too sick to care about mail at all, and your letter or card might mean a great deal to some other family member.

Letters of Condolence

Of all sympathy letters the most difficult to write are letters of condolence. Still, people who have suffered bereavements tell us these letters are deeply appreciated.

On this basis we should write them in the name of friendship and human kindness.

Here are a few suggestions to help you get started. Letters of condolence should be brief, tactful, and sincere. They should be brief out of consideration for the emotions and fatigue of the bereaved, tactful because of your desire to comfort, and sincere to show your own depth of feeling.

Express your sorrow and sympathy at the person's loss. If you know the deceased, then it is fitting to recall something especially nice about him . . . to pay tribute to a personal gift, a special skill or a fine achievement. For example: "Your father will long be warmly remembered in our part of the country for his many years of devoted service to our Community Center."

An offer to help should be put into words. "Please let me know if there is anything I can do for you or the family"; or "Please don't hesitate to call upon Dave or me for anything we can do."

An appropriate closing for a letter of condolence troubles those of us who want to be affectionate without being gushy. One way is to use a phrase such as "Please accept our sympathy and our love."

All Sympathy Letters

A sympathy letter is a true test of our ability to assess another person's state of mind; it's also a test of our compassion for the troubles of others.

The word "sympathize" means: "to share or to understand the feelings of another; to feel or express sympathy, especially pity and compassion." William Blake, the English poet, explains it this way: "Can I see another's woe and not be in sorrow too? Can I see a falling tear and not feel my sorrow's share?"



Students mix on-the-job training with recreation in Ontario's forestry camps. They're known as

Junior Forest Rangers

by KAY LAMBERT

"WHY does an elephant smoke a pipe?" "Well, he'd look awfully funny smoking a Camel, wouldn't he?"

It's hardly knowledge to be stored away for future use but typical of the banter to be heard at Junior Forest Ranger Camp last summer. When some 20 young men, all 17 years of age, spend 8 weeks working and playing together, a lot of such banter is exchanged. It's a part of learning to live with, and enjoy the comradeship of others.

Are you wondering what a Junior Forest Ranger Camp is? These camps are sponsored by the Ontario Department of Lands and Forests. They are operated by the Department in isolated locations throughout Ontario for the purpose of giving on-

the-job training for high school students interested in making forestry work a career with the Department supervising the Junior Rangers in a program of work planned to teach a better understanding of the province's natural resources.

Last summer our son was one of over a thousand young men to take advantage of this program. As with many of the Junior Forest Rangers, Les heard of the camps through his Guidance teacher at high school. Students who are accepted get a detailed list of the clothing and other articles suitable for camp life. They are encouraged to take musical instruments and/or fishing gear but are advised that hunting knives or firearms are not allowed in camp.

In Ontario, Junior Rangers are



While there is plenty of work for high school students who become junior rangers they have ample time to improve their swimming and fishing skills.

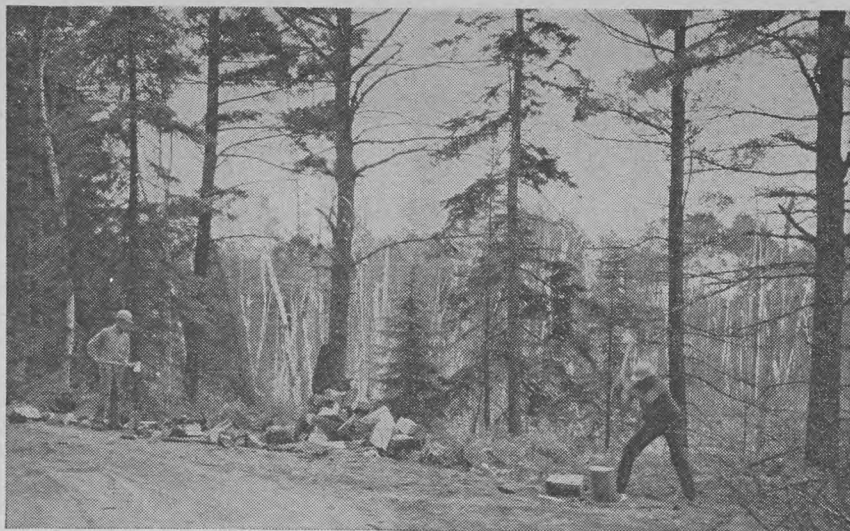
paid \$4 per day plus room and board. Since they stay in camp 8 weeks with no week ends off they manage to save most of the money they earn.

OUR Les had to report July 1 to Gogama camp, 1 of 64 such camps in Ontario. Gogama, we discovered, was about 200 miles north of Sudbury. From Les' first letter home, we learned that the camp was 7 miles beyond Gogama, on Lake Lamotte. This lake, Les wrote, was "loaded with loons!"

In some camps the boys use tents; at Lake Lamotte cabins were pro-

vided. Each week four boys took on kitchen duty; they waited on tables, did dishes, peeled potatoes, chopped wood and cleaned up the cabins and grounds.

Meals are important to every growing boy and Les found the camp food excellent. Shortly after 7 a.m. the boys would spread the long tables in the mess house with cereal, juices and milk; the cook's helpers for the day brought in eggs, bacon, toast and jam. When they worked some distance from base, they carried lunch with them. But supper . . . that was something else. Pork chops, sometimes steak, potatoes and vege-



Junior rangers chop short length logs for use as firewood in camp areas.

tables, homemade pies, cakes and even buns! And all they could eat! Still another snack was provided before lights out. There was no reason for a Junior Forest Ranger to go home looking ill-fed!

During their first days at Lake Lamotte, the Junior Rangers cleared up the shoreline around the camp in preparation for putting in a dock and making a beach. Later, trucks took them farther afield, to work in areas being developed for campers. In the beginning they thought they'd just be tidying up a park area. Instead they found they had to start from "scratch" and help to make campsites, roads and such. Saws, brush hooks, axes and rakes, and a bulldozer became familiar tools. And it took several weeks of hard work before they could see some tangible results. But there was time for the lectures on insects, wildlife and forestry of Junior Rangers' training.

Recreation was not overlooked. The Junior Rangers' baseball team played the Senior Rangers. It even won some games. During Gogama Field Day in August the Junior Rangers participated in what were new, exciting and unusual contests. For example they took part in canoe tilting, canoe racing and tug-of-war. In the tug-of-war they teamed up with local Indians against the Senior Rangers; and they competed in baseball. A dance in the evening rounded off an exciting day.

Lake Lamotte offered excellent fishing and on one trip on the lake the boys caught seven fish within an hour. Other boys tried their hand at snaring wolves—without success. They had their eyes on the \$25 bounty! One of the thrills of the summer was a trip in the Beaver pontoon aircraft operated by the Department of Lands and Forests.

When time permitted the boys swam and hiked. On one occasion, after a rainy week end Les wrote us: "When the rain let up, we went canoeing and paddled all over the lake. Saw a beaver dam and quite a few beaver lodges. Jim and I beached the canoe and followed a beaver trail up a hill and back into the bush. The beavers had been cutting down timber and sliding it down the hill into the water for their huts."

There were other moments to remember. On another occasion the lake became very quiet and beautiful as the boys paddled across it and they found themselves singing and whistling for sheer pleasure in their

surroundings. Les explained that they just had to beach the canoe near a large rock mass and climb to its summit to survey the surrounding scenery. For him it was truly a moment to remember.

UPON inquiry I learned that the Province of Quebec operates a program somewhat similar to that of the Ontario Department of Lands and Forests. Last summer its "Students' Forestry Camps" employed about a thousand students. Their minimum age is 18; pay is related to their academic standing. For example, the range is from \$150 a month to \$275 for a 4th year University undergraduate. Information is available from the Director, Students' Forestry Camps, Province of Quebec.

British Columbia employs about two hundred boys in camp work in its provincial parks during the summer. Information can be obtained from the Department of Recreation and Conservation, Parks Branch, Victoria, B.C.

In addition to these programs for high school and university students, most of the provinces have Junior Forest Warden programs for boys between 10 and 16. The New Brunswick program is linked with scouting and boys can eventually qualify as Rover Forest Wardens. British Columbia and Alberta also have Junior Forest Warden Clubs and groups and in Manitoba the Canadian Forestry Association offers an educational program through the schools.

the challenge of tomorrow

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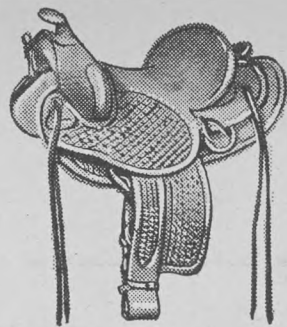
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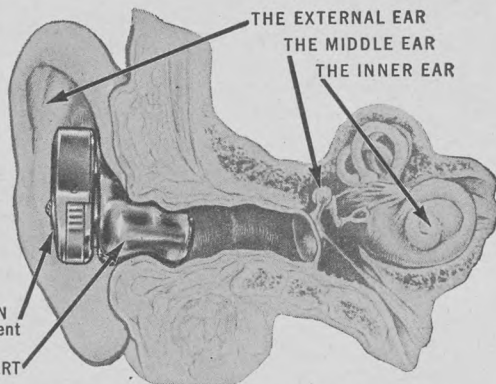
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Billy's Easter Bunny

by KATHERINE HOWARD

AS seven-year-old Billy ran into the farmhouse from the yard, he shouted "Mom! Dad! Look! I've got a real Easter Bunny!" It was Easter morning. Billy had longed for a pet rabbit since he was four, and he'd been very lonely since Shep, his dog, had been killed by a truck two weeks before.

"It's tame," he called. "It came right to me. It isn't a wild one 'cause they're still white . . . it's tame."

"It's some little boy's pet," said his father. "It must be lost. We'll have to find out who owns it . . ."

Billy's blue eyes were miserable. "But nobody around here has a rabbit." He held the little brown rabbit closer. "I know, because Miss Saunders wanted a rabbit for our Easter play at school. We asked all over school . . . in every room. Oh Dad, let me keep it, please . . . please."

"If you turn it loose," said Billy's mother, "the coyotes or something might get it."

"I'll look after him," said Billy, "he'll be no trouble."

"All right. But just until we find out who owns him. I'll put an ad in the Carlton News. Maybe some little boy is crying right now because his pet is lost."

Billy felt sad for a minute or two. But when two weeks went by and nobody came to claim the rabbit, he forgot about anybody else. He called the rabbit "Thumper," of course, and fed him carrots and lettuce, bran and milk.

Then one Saturday morning the phone rang sharply and Billy felt a queer feeling go over him as his father answered it.

After his father had hung up the phone he said, "Billy, I'm afraid you'll have to give up Thumper. That was the Grandma of the little boy who owns him. She was away from Carlton for two weeks, and when she came home, she saw our advertisement. Her family were out to visit her from the city and they evidently didn't know Thumper was in the car with them . . . I guess that's how he got lost. She's going to phone them and they'll probably be out later today to get him."

Billy's Dad went out to the barnyard. His mother was busy upstairs. For a long time Billy stood looking at Thumper, happily nibbling carrots in his hutch. He couldn't give up Thumper. He just couldn't. One big tear slid down his cheek, then another.

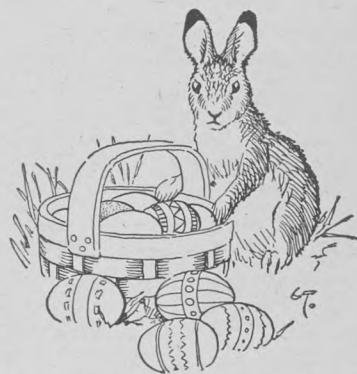
At last he knew what he must do.

Putting on cap and coat, he took Thumper out of his hutch and went into the bush at the south side of the garden. He set Thumper down in front of a big old hollow log where he sometimes played. Thumper sat quite still, nibbling at some grass that was poking through the muddy earth.

Billy collected chunks of wood, branches and stones. Then he put Thumper inside the hollow log. Next he packed the wood and stones across the front of the hollow log.

"Thumper will be safe there, until the people have gone," he muttered.

BACK at the house, he left the porch door and the hutch open, and went into the kitchen. But he felt awful. He had a heavy lump in his stomach. He felt mean and dreadful. He thought of the little boy coming so far to find his pet . . . but it would be gone. Billy would know where it was. He would know! It was no good. He just had to bring Thumper back.



He ran out of the house without his coat and cap, down to the hollow log. But the stones had been pushed away, the wood and the bushes knocked down! Trembling, Billy knelt down and looked inside the log. Nothing! No little brown rabbit.

"Thumper! Thumper!" he shouted. He ran down the trail into the wood. He looked from side to side, from bush to bush. Then a cold shiver shot from his sandy hair to the tips of his toes. There was Thumper, crouching under a bush. Over him, on the branch of a thick spruce tree, a lynx waited to spring!

Billy yelled wildly. He picked up a short heavy piece of poplar from the ground and threw it at the lynx.

with all his might. It snarled, slunk down and went off into the bushes. Billy gathered Thumper up, in his arms and dashed off home.

His father was talking on the phone. He sounded pleased. "All right," he said, "we'll be glad to do that . . ."

After Billy had fastened Thumper safely in his hutch, he went into the kitchen. He had a lump in his throat. Soon they'd come for Thumper, he thought sadly.

His father smiled at him. "That was the lady who phoned before,

Billy. Her son has been transferred to the States and the family are leaving soon. They can't take the rabbit with them and they wanted to know if you would like to keep him."

Billy sat down on the nearest chair. His legs were trembling. He was so happy he couldn't help but cry. At last Thumper was his very own, his very own Easter Bunny.

He shivered when he thought of what might have happened to Thumper. "I'll never ever think a mean thing again," he said to himself as he ran out to tell Thumper. ✓

Puzzle Corner

Farm Animals

C	A	W
T	O	G
H	D	P
S	E	E

Beginning with any letter, move one square at a time in any direction, to the right, left, up, down, or corner to corner. How many animals can you find?

Answer

Cat, Cow, Dog, Goat, Hog, Sheep.

Animal Babies

My mother is a woolly ewe,
My father is a ram.
I like to run and jump and play,
I am a little _____.

My mother is a big white sow.
My father is a boar.
I eat as much as a _____ should
And then I squeal for more.

My mother gives a lot of milk
Because she is a cow.
Some day I'll be a bull like Dad,
But I'm a _____ right now.

Answers

Lamb, piglet, calf.

The Provinces

On the walls of the House of Commons in Ottawa there are stone carvings that represent the industries important to each of the provinces. Here are brief descriptions of the carvings. Can you name the provinces represented by these descriptions?

- 1. A sailor and two anchors
- 2. A turbine
- 3. A farmer on a tractor
- 4. A lumberman with his ax
- 5. An airplane

- 6. A sailing ship
- 7. A cowboy on his horse
- 8. A farmer with a hayfork and spade
- 9. A miner
- 10. A fisherman hauling his nets

Answers

(1) Nova Scotia. (2) Quebec. (3) Saskatchewan. (4) Newfoundland. (5) British Columbia. (6) New Brunswick. (7) Alberta. (8) Manitoba. (9) Ontario. (10) Prince Edward Island.

Word Stairs

Word stairs are built from the bottom. Each new step drops the first letter of the word and adds a new letter at the end. Follow the clues to build these two stairs. Remember to start at the bottom.

- finishes
- repair
- prayer ending
- crippled
- shellfish used in chowder
- girl's name
- snake-like fish
- spool
- Indian group
- measure of land

Now try some word stairs of your own. You might like to try 3-letter or 5-letter words. How high can you build your stairs?

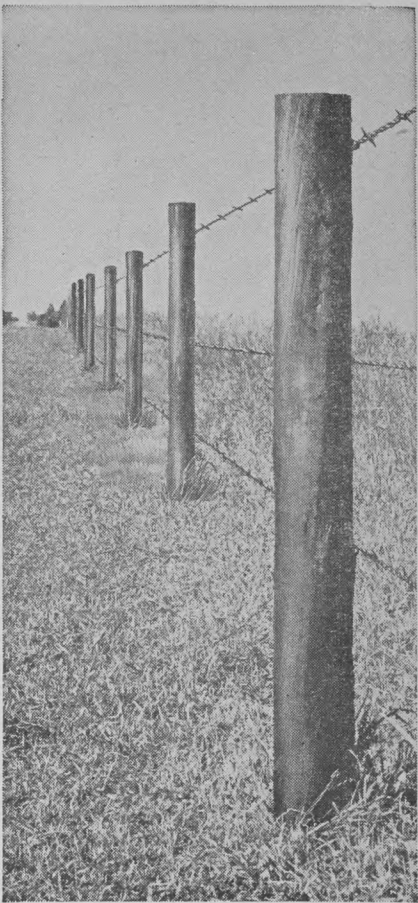
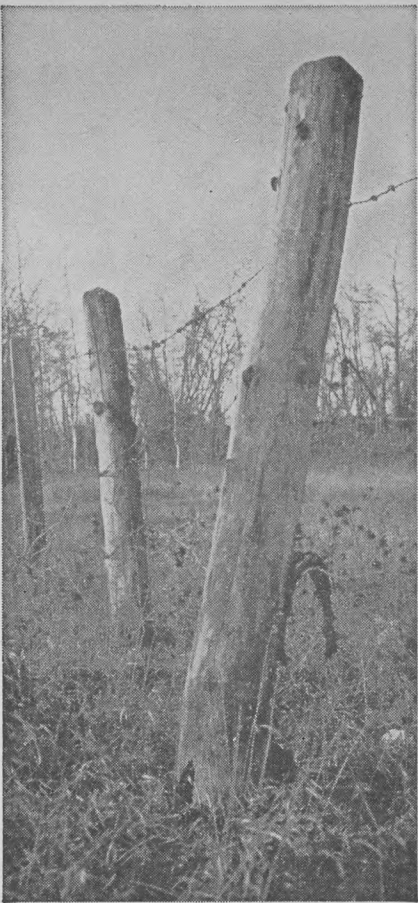
Answers

- 1. Clam, lame, amen, mend, ends.
- 2. Acre, Cree, reel, eels, Elsa.

A Polite Word

My first is in CAP, but not in HAT;
My second's in SQUIRREL, but not in RAT.
My third is in APPLE, but not in PLUM;
My fourth is in SEVERAL, but not in SOME.
My fifth is in SING, but not in DANCE;
My sixth is in BEES, but not in ANTS.
My whole is a very polite kind of word,
And parents look happy whenever it's heard.
What is it?

Please answer:



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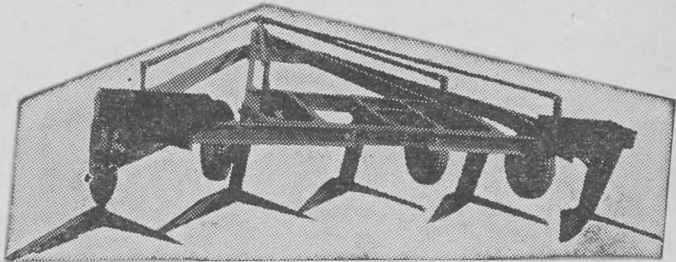
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Fruitwood Cure for Canadian Pork

by JOAN MARSH

IF proof is needed of the old saying that one man's meat is another man's poison, that proof certainly is provided today in the small Okanagan Valley town of Westbank. There, a country butcher is building a substantial business in cured meats, using a do-it-yourself smokehouse and wood from damaged fruit trees. Fruit growers may lament when valuable trees must be cleared and replaced; butcher Arthur Haase benefits.

Haase, whose one-man shop supplies most of the area's meat requirements, uses fruit wood to produce a special cure for hams and bacons. From a minuscule beginning, his trade in smoked meats has grown to the extent that he cannot keep up with demand. And he is always in the market for fresh supplies of peach and cherry wood.

Arthur Haase came to Canada in 1930 from Denmark, where he learned the butcher trade as an apprentice. In Denmark, he is quick to tell you, he studied for 4 years to become a qualified butcher. He received no pay until the fourth and final year, and then only the equivalent of about \$10 a month. An apprentice spends his first year on the "killing floor." The second year he learns to make sausage and cure pork. In the two succeeding years he polishes up his prowess in buying, cutting and actual counterselling of meats. We think of Denmark as a country famous for its bacon and other pork products, so it is not surprising to find Haase specializing in the curing and smoking of Canadian hams and bacons.

Behind his house and meat market, Haase built a smokehouse. Constructed of poured concrete, it is roofed with galvanized steel strips, and is somewhat like a large telephone booth, with bars along its ceiling from which meats are sus-



The fragrance of fruit wood gives sides of bacon from Arthur Haase's home-made smokehouse a distinctive flavor. The heart of the smokehouse is the old iron stove which is stoked and damped from the outside. See diagram.

ended. The heart of the smokehouse is an old-fashioned iron stove built into its concrete base. The stove is stoked and damped from the outside, and has a pipe extending inside in an inverted "U" to release smoke near the floor.

Chunks of apple, peach and cherry wood have been burned in the old stove for the meat-smoking process, but Haase feels that peach wood gives the finest flavor. If peach wood is not available he uses cherry in preference to apple. However, any one of these woods gives a smoky fruit taste and aroma to the meat.

When he first arrived in Canada, Arthur Haase lived in Stony Plain, near Edmonton. Three years later he moved to the northern B.C. town of Quesnel. After 3 years there he finally settled in the Okanagan. In each of these locations he smoked pork, using native willow and alder wood or sawdust; sometimes he imported maple from Eastern Canada to get a "faster smoke" than the "slow smoke" of local woods.

He buys pork locally when it is available. Otherwise he buys from suppliers in Edmonton and Calgary. When the meat is cut and trimmed, Haase puts it in brine for 9 days. Alternatively he rubs it with dry rock salt over a period of 12 days. He says that brine gives the most uniform cure. This he makes by mixing 7 pounds of dairy salt with 1 pound of purified salt petre, 2 pounds of sugar, and "enough water to make a solution that will float a fresh egg." This much brine cures 100 pounds of meat.

After soaking in brine for 9 days, the meat is carefully washed in clear water, dried, and hung in the cold smokehouse for several hours to dry further before firing. Then the old stove is stoked with firewood. When the fire is very hot it is damped down and the fruitwood smoke goes to work.

Fruit tree woods are hard and burn slowly and steadily, giving off a high heat. A 15-pound ham gets approximately 24 hours in the smoke-

house, from the time the fire is first damped down. This treatment produces what Haase terms a "medium" cure. For a light cure, the 24 hours are cut to 12.

Haase also smokes fish, venison and mutton, pheasant and turkey. Local sportsmen often bring in their catches of lake trout for smoking. They are cleaned, sprinkled with salt and left overnight. Then they are washed and given what Haase says is "a good hot smoke." They can then be eaten without further cooking.

Venison is smoked in much the same way as pork. Arthur Haase has his own special method of curing turkey, one which he will not divulge. He also makes and smokes his own special blend of sausage.

When the Westbank butcher first began to use fruit wood for smoking meats, the wood supply was good. A bitter winter had killed thousands of mature fruit trees in the Okanagan and disgusted farmers were almost willing to give the wood away. Today, this dwindling supply is augmented by trees cut to make way for large building developments.

Haase and his wife, now Canadian citizens, have six children, but only the youngest shows any inclination to join his father in the meat business. Haase's advice to people who ask him about the best way to choose good meat is "know your butcher and trust his judgment."

When the residents of Calgary and Vancouver who flock to the Okanagan for the summer months seek Arthur Haase's advice on how to impart a special sweet and piquant flavor to charcoal-broiled steaks and hamburgers, he tells them to sprinkle wet fruitwood chips among the coals of the barbecue pit. It's reported that the results are delicious. But then Arthur Haase knows about these things. Meat is his bread and butter!

Around the House

by BLANCHE CAMPBELL

Another use for your egg slicer is for boiled beets. The slices will be more uniform and the work, easier.

* * *

The large dropper used for basting or removing grease in the kitchen is just the thing to use to water those delicate ceramic planters that are hard to remove from the wall.

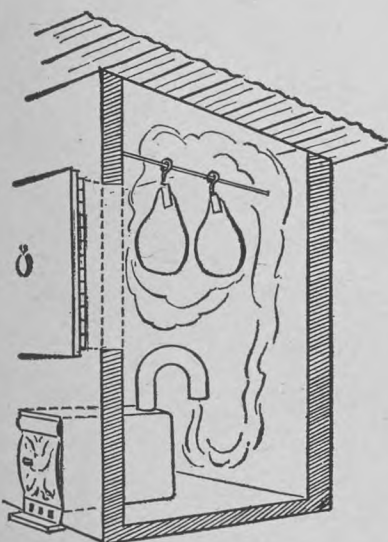
* * *

When thumbtacks need to be anchored into place, wear a thimble on the finger you use for pushing. You won't break your fingernails and will prevent sore fingertips.

* * *

Sharpen dull scissors easily by cutting through a few strips of fine sandpaper with them.

V



This cutaway diagram of the Arthur Haase smokehouse shows the steel bar that holds meat on hooks. The roof of galvanized steel strips fits loosely. As a result the smoke escapes slowly and does not go stale.

COUNTRY GUIDE

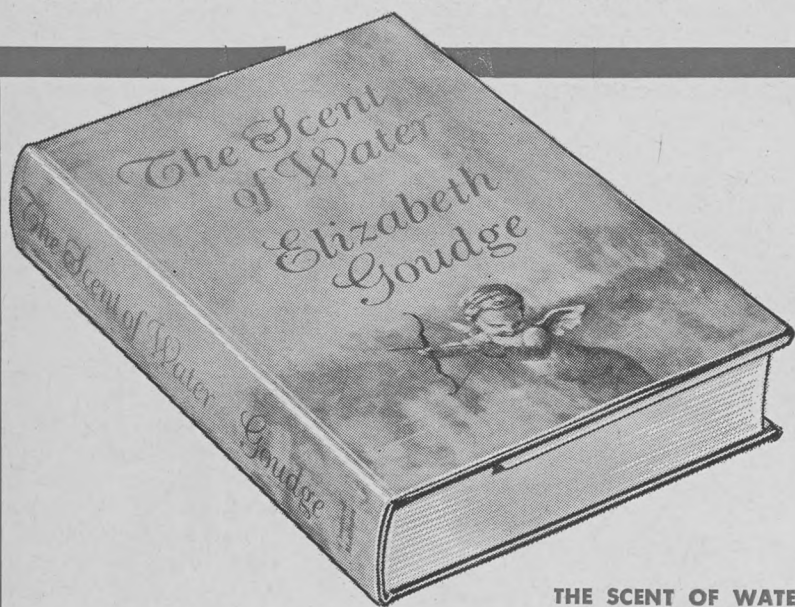
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Do we treat our pigs as friends? Maybe we should, says the author, if we want the best from them

by E. R. YARHAM

PIGS IN PARADISE



APPARENTLY, if we want good bacon, we must take into account the pig's desire for affection and human company. In other words, scratching the sow's ear pays dividends.

Animal specialists at Wye College in Kent, England, found that they could not ignore this. Although all kinds of brilliant ideas were put forward for luxurious farrowing pens, the sow did not want them. It liked the simple, old-fashioned cottage pen, where the pigman could get to it, scratch its ear, and talk to it. Sows soon looked forward to those visits and were at ease at farrowing time, when their keepers were with them. The extra labor involved in making friends with the sows was well worthwhile because of the number of piglets saved.

Englishmen may make a fuss of their pigs, as the above shows, but some little time back, 20 British agriculturists learnt with frank and even rather amused astonishment about the planners' paradise in which many Russian pigs are living, with benefit to themselves and to the Communist economy. Russians claim that the sows show their gratitude by maintaining an annual litter rate of 20 to 22 pigs, which suggests that some sows are nowhere near pulling their weight yet.

In Russia, there are women attendants working shifts, day and night, so that the sow always has a friend and helper when it is farrowing. As the piglet is born, it is whisked away from the sow, placed in a barrel, and given an identity mark. Meanwhile, the sow's teats are marked and, when the piglet returns, it is trained to suck only its own teat.

This is not all. The visitors noticed on several farms that the pigs were washed every day. In some places, swimming baths had been made in the adjoining river, into which the pigs were driven and made to swim for it. And, one day each week, the pigs were washed in hot water and soap.

According to reports, the pigs enjoy their wash and swim. And there's evidence from New Zealand that this love of water is inherent in Antipodean pigs, too. A pig that took its daily dip became one of the sights of the port of Napier, where Susie, 9 months old, could be seen enjoying a daily swim with her young master and his dog.

Remarkable Beast

Human beings have been far too prone to attack the pig for his manners. It is true that the pig shouldn't put its forefeet in the trough, but the charge that it is a dirty animal was refuted long ago in the couplet:

*Give us fresh water and nice clean straw;
Poor little piggy-wigs ask no more.*

In fact, the more one knows about the pig, the more remarkable a beast one realizes it is. One Brazilian pig-breeder went so far as to assert that there was little essential difference between pigs and humans. There is also an ancient country saying which sums up the animal's qualities very succinctly, as follows: "Dogs looks up to you; cats looks down to you; but pigs is equals."

Prof. R. A. Wardle, a Canadian zoologist, is another champion of the pig, for he has said: "The hog is undoubtedly intelligent, and I imagine he could easily be house-trained. I see no reason why, in time, we should not have some quite desirable varieties of pigs sitting on our doorsteps."

Properly handled, pigs do make passable pets. The professor would have been interested in what an English traveler saw on one occasion. He was passing through a Belgian village when all the people were at Mass, and he watched a solitary pig trot up the street. It paused before a door, opened the latch with its snout, entered, and sat by the fire, where a savory mess was boiling.

The lady from whom Dickens is thought to have taken his portrait of Betsy Trotwood (her real name was Betsy Jones) had a pet pig. This animal answered to the name of "Geordie," and was well known to neighbors and friends as he went for a walk by himself every day in the Blackfriars Road, London. More recently, during a British general election, a month-old pig followed its mistress to the polling booth.

Perhaps the top award for personality ought to go to Sir Henry Mildmay's "pig pointer," which lives in sporting history. This sow flourished early last century and, it is said, was called upon by huntsmen who were exasperated by their "huntless and inactive" pointer dogs. The sow got to work and pointed partridge, blackgame, pheasant, snipe, and rabbits, and would out-point most of the dogs of her day.

This sow began her unusual career when she was 18 months old. But, alas for the ingratitude of man, she was killed by a new owner when she was 10. As Southey, the poet, said: "The pig is a philosopher, and needs to be, because man never really gives it a chance."

No Education

Dr. Samuel Johnson is reported to have said of the pig that "we do not allow time for his education; we kill him at a year old." And Thomas Hood wrote a poem entitled *The Lament of Toby, the Learned Pig*, and among its laments was this:

"A thing that would be rash in man, in me would be a rasher."

During the last war, when bacon was severely rationed in Britain, a public-house fellowship passed from grumbling about the scarcity to form a pig club. They saved their household wastes for their pigs, and the publican saved the beer that dripped from taps and the dregs from the barrels. The pigs hastened their end as they did so well.

On one occasion, the humorous magazine, *Punch*, published a set of verses entitled *The Best Smell of All*. Several noble smells were cataloged, and then came this:

*But there's a smell that doth excel
All other smells by far,
Even the tawny stable smell
Or the boisterous smell of tar;
A smell stupendous, past compare,
The King of smells, the prize,
The smell which floods the startled air,
When home-cured bacon fries.*

Which brings us to the fate of a notable World War I pig. It escaped from the sinking German cruiser *Dresden* and was captured by a petty officer of the British cruiser *Glasgow*. It became the ship's mascot and acquired habits like eating coal and charging people's legs on sight. After various adventures, the pig was sold in a Red Cross raffle, which raised £400. The rest is silence . . . but we trust that a pig with such a distinguished record died a natural death. V

Illustrated by PIERRE



NEWS HIGHLIGHTS

(Continued from page 13)

money representing the proceeds of the sale of wheat in world and domestic markets.

The Saskatchewan Family Farm Improvement Branch has announced that its activities will be expanded to include a small farmstead mechanization program. During its first 4 years the Branch concentrated on farm water and sewage installation. In that period some 10,000 systems were installed.

The International Wheat Council has made an analysis of China's wheat needs in light of crop production during the past few years and her rapidly growing population, which is now in the neighborhood of 735 million people. It reports that there is a greater possibility of China continuing to purchase wheat on a substantial scale than might be anticipated if grain imports depended wholly on the need to supplement precarious food supplies. Council goes on to say that it would be rash to assert that grain imports will remain at their present high level, but it would seem a reasonably sober estimate to expect a substantial market to remain in China for some years to come.

The day when a farmer can cultivate the back 40 acres of his farm from the comfort of his favorite chair may be coming, according to G. C. Zoerb, associate professor of Agricultural Engineering at the University of Saskatchewan. He says that increased research and the adoption of automatic controls for farm equipment may foster the use of radio-controlled tractors with gas turbine engines and automatic transmissions. He also forecasts the use of hovercraft for crop dusting, frost protection, irrigation ditch control and herding cattle.

Canada's population reached an estimated 19,102,000 on January 1 this year, up 1.8 per cent from a year ago.

Canada's farmers received a record \$3,222,335,000 from farming operations (excluding supplementary payments) in 1963, an increase of 2.2 per cent from the preceding year. Including supplementary payments, farm cash income reached \$3,237,100,000, up slightly from 1962.

Canadian Holsteins were shipped to 16 different foreign countries last year and three of these, South Africa, West Germany and Bolivia, represented first purchases in Canada. Another first was a direct flight of livestock from Malton Airport to Japan.

The Hon. Mitchell Sharp, Minister of Trade and Commerce, reports that following discussions with refiners, representatives of the sugar beet producers and representatives of commonwealth sugar producers, he has come to the conclusion that this is not an opportune time for Canada to enter into any long-term arrangements for the supply of sugar from overseas producers.

An agricultural economist from North Dakota State University says that because population is growing faster than the ability to increase

food output in underdeveloped countries, the need for wheat on the world market is expected to rise dramatically. He foresees the substitution of wheat for rice as a food staple in many areas. V

POULTRY PROMOTION GRANT MAY NOT BE RENEWED

Speaking to the annual meeting of the Poultry Products Institute of Canada, the promotion arm of Canada's \$300 million poultry industry, Drew Davey, chief of the CDA's Poultry Services, said he couldn't guarantee that the \$10,000 Federal grant for poultry products promotion would be paid this year.

"Many people feel the Government shouldn't subsidize promotion for the domestic consumption of poultry and poultry products," he said. "They think the industry should stand on its own feet in this regard."

Mr. Davey said that he was inclined to agree with this. In his opinion, the department's efforts should be confined to products and market research, including a search for new markets.

In line with this thinking, Institute members voted to increase their promotion fund goal from \$60,000 to \$80,000, part of this to be raised by the new "bag and tag" assessment method begun last January. This involves a charge on all bags, tags and cartons used in processing.

The national body also gave the Alberta Division of P.P.I. permission to try a new method of fund raising. This group has set a goal for their own promotion of \$30,000 — over three times their budget for 1963. They plan to discard all set-asides on eggs, broilers and turkeys and raise about two-thirds of their money needs by assessing processors (at the latter's request) on all plastic film used for tray-packed broilers and fowl, and bags for fowl, chicken and turkeys; also on molded fiber trays for eggs, and egg cartons. The remaining \$10,000 is expected to come from various Alberta producer groups and associations.

Turkey producer Ben O. Brown, Midnapore, Alta., was elected Institute president, succeeding Jacques De Broin, Montreal. Vice-presidents are E. R. Hoover, Burlington, Ont., and G. E. Anderson, Winnipeg. Secretary is S. L. Rodway and treasurer is H. McPhail, both of Toronto. V

SUGGESTS FOOD COUNCIL

One of the greatest needs of the Canadian food industry is to develop better communications and understanding between the several segments of the industry, according to Elmer T. Banting of the Food Products Branch of the Federal Department of Industry. Speaking to the Meat Packers Council of Canada, he said that too often one segment of the industry blames another for its problems. Often the claims are not only inaccurate, but unfair. (For example, farmers often blame the packers for low prices; the packers blame the farmer for producing the wrong kind of livestock; and the retailer blames both for increased retail prices.)

To meet these difficulties, Mr. Banting suggests a national food council might be formed which would include representatives of the primary producer, processor, distributor, wholesaler and retailer. The purpose of such an organization would be to have all groups work together and exchange information in meeting problems. It would not be an organization set up to negotiate with or combat any group or section of the industry.

To illustrate the need for such action, Mr. Banting referred to a survey he had made. He found that some buyers for chain stores and independents said they were more aware of what was available in other countries, particularly the United States, than in Canada. As a result, Canada imports large quantities of processed foods (possibly as much as \$200 million per year) which could be produced here. He suggested that the food industry cannot prosper if imports are used to expand one section at the expense of another. Every dollar of the market which is recaptured for home-grown and processed products will produce a healthier economy, he stated.

Mr. Banting concluded that if all segments of the industry would work together, and in turn if all segments work in close co-operation with provincial and federal governments, he was sure the industry could meet the challenges which lie ahead.—J.M. V

PRAIRIE HORTICULTURAL PRODUCTION INCREASES

Horticultural crops tend to be luxury crops because they are relatively expensive in relation to their food value, Dr. Chas. Bishop, CDA, Ottawa, told the 21st annual meeting of the Western Canada Society for Horticulture at Banff recently. He said man's standard of living must continue to grow so the family budget can afford to go beyond staple foods such as cereals and animal proteins. If not, the market for horticultural delicacies will be very limited.

Annual production of horticultural crops for the Prairie Provinces is \$15 million, out of a total Canadian production of \$200 to \$250 million. However, farm income for canning crops and potatoes is rising steadily and fairly rapidly in this area. Main reasons for this are large acreages of good cheap land, an adequate supply of irrigation water, plus long



W. A. Cumming, newly elected president of the Western Canada Society for Horticulture, receives gavel from outgoing President R. H. Knowles. [Guide photo]

days of sunshine and a dry atmosphere which limits fungus disease growth. The disadvantage of a relatively small population, which means produce must be shipped to distant markets, is being offset by an increase in the canning and processing industries here.

Because of the special personnel and facilities involved in the breeding of new varieties, Federal horticultural research is now being concentrated in a relatively few big centers, Dr. Bishop explained. The universities and provincial departments are taking over an increasing share of research into local problems in specific areas.

"We must co-ordinate these efforts to avoid duplication and waste," he said. "In a country like ours, where the population is small, we cannot afford the luxury of duplicate effort."

The last day of the meeting saw W. A. Cumming, CDA Experimental Farm, Morden, Man., installed as president, with John Walker, University of Alberta, remaining as secretary-treasurer. V

BIG FUTURE FOR MEAT

"Instead of encouraging grain production for relatively short-term export markets, we should be building up our feed grain reserves for livestock." So stated J. R. A. Robinson in his presidential address to the Meat Packers Council of Canada.

Backing up this statement, Mr. Robinson said that estimates suggest the Canadian population will be 40 per cent higher by 1980 and that per capita meat consumption will be up 22 per cent, giving a total increased requirement at home of some 80 per cent. In addition, demands from abroad will increase so that within 15 years there is little doubt Canada will be called upon to double meat production. He added that in recent years, if we ignore exports of feeder cattle, we have imported twice as much meat as we exported. This, Mr. Robinson felt, was an indication of failure to plan and work toward our needs of the future.

In view of the challenge ahead, Mr. Robinson said we must find ways and means of producing increasing numbers of meat animals, while keeping an eye on world competitive costs. This would mean helping farmers produce and market livestock in competition with those countries who, at the moment, are only too happy to make their surpluses available to us.

Mr. Robinson was critical of government officials who urge farmers to raise more grain, to the detriment of livestock. He warned that the Western farmer is in danger of losing his traditional Eastern market for livestock and meat, because he has chosen to return to a grain economy.

Mr. Robinson urged that instead of leaving livestock production to find its way as a by-product of modern farming, its status should be raised to the level it has earned because of its economic importance to the agricultural community and to the country as a whole.—J.M. V

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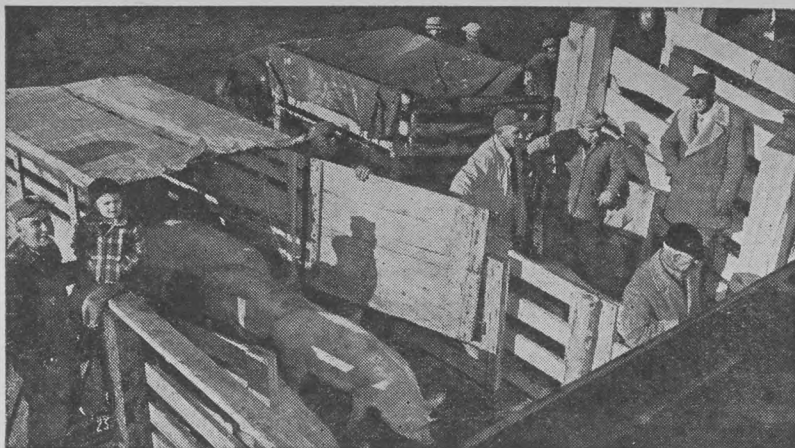
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[Guide photo]

Farmers deliver their hogs to assembly points in the country prior to selling them by auction.

Selling Hogs By Auction in Alberta

*It's an alternative to producer marketing boards
if all phases of the industry will co-operate
to make it work*

by **CLIFF FAULKNER**

Field Editor

SELLING hogs by auction is a good, workable system if all the people concerned are really interested in keeping it going, according to George Winkelaar, general manager of the Alberta Livestock Co-operative Ltd. Without this co-operation between producers, sales agencies and packers, the effectiveness of this method of price setting is lost. George speaks from experience for the A.L.C. has been selling hogs by this method for the past 7 years.

By 1957 selling beef by public auction was working so well in Alberta it was decided to try the same method for hogs in the hope of attracting more hog business to the yards. Before this, all hogs were sold on a contract basis with prices being established through public market sales at Calgary and Edmonton. About a year after the new method was introduced, the A.L.C. decided to sell their "country" hogs by auction too so that all their hogs would now be sold by competitive bidding. "Country" hogs is the tag given to those offered through the A.L.C.'s co-operative shipping associations located throughout the province.

These hogs were offered for sale in various load lots, the same as those actually passing through the auction ring at the public stockyards. Country hogs from the south-

ern part of Alberta were sold through the Calgary yards; those from the north were bid on at Edmonton. Bidding occurred on the day of accumulation at the country points, or on the day previous to accumulation. The animals were sold f.o.b. the shipping point, and the deal was subject to certain agreed conditions of sale. By increasing the flow of hog sales through the competitive bidding channels of the public yards, it was hoped the yards would set the prices for the whole industry as they had done for beef.

"And for awhile it worked," said Winkelaar. "Hogs were consistently sold for more than the Government support price. But the auction method was introduced at a time when hogs were in oversupply. As soon as they became a little scarce, the packers paid no attention to established price structures. They began to make their own private deals with various producers and truckers."

The competitive bidding method suffered another blow when a new packing firm was started in Red Deer. Co-operative associations shipping to the A.L.C. found they were handicapped. The packers would no longer go for the idea of tying up the hogs in that area, so the whole area was withdrawn from auction selling. This left only about 15 per

cent of all Alberta hogs still being sold by competitive bidding.

Later, a Calgary packing firm began feeding out its own hogs so as to have a source of direct supply that wouldn't have to be bid for. They bought the hogs and the feed, paying a Lacombe district farmer so much per head for his time, buildings and equipment. This method has been widely used in Quebec and is one reason for the expanded hog production in that province.

"It's the same old story," George Winkelaar smiled. "Do everything possible to minimize competition. Another way this is done is by each packing firm respecting another's traditional buying areas. For instance, if a consignment of hogs comes from Grande Prairie the animals generally go to the packer who normally buys from that area. The other packers won't raise their bids in an attempt to get these animals away from him."

In 1959, 25 per cent of all Alberta hogs were selling on a competitive, open market basis. Today, less than 7 per cent are sold this way. These are the animals actually being delivered to the public stockyards to be sold in the auction ring. For the most part, the consignors are people who are located close to the big markets. They do it mainly because they believe private deals eventually work against the producer. This belief costs them 55 cents per hog—35 cents commission and 20 cents for yardage. Some consider them to be the unsung heroes of the hog industry because, without this faithful few, competitive selling of hogs would disappear altogether. Even this small percentage passing through the yards exerts a little influence on prices.

"There is now no direct relationship between public market prices and country prices," Winkelaar stated, "but yard prices are still used as a jumping off place on which to base prices for direct buying. At least it suggests a price to start with. Nobody gets less than this price."

This lack of volume through competitive bidding channels is the main reason for the decline of the auction method of selling hogs in Alberta. To parody a famous phrase of Winston Churchill's, "Too few hogs are trying to set the prices for too many." If the present 7 per cent could be increased to about 40 per cent there would be a fairly sound basis for establishing more realistic values. But, as Winkelaar pointed out, this would take a new spirit of co-operation within the industry and there are no signs that such a spirit is forthcoming.

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SEE ONE OF THE GREAT HIGHWAY PERFORMERS—CHEVELLE

This Farm Was Saved

(Continued from page 15)

Not long ago, at a Law convention in Banff, one delegate asked that the Government set up machinery so there will be less delay in land takeovers. He obviously has never been faced with expropriation.

Gordon Douglas, who almost lost his place, has another idea. Said Gordon, "There should be a law stating that those who seize property must pay a 'severance' bonus of 50 per cent to help pay for the extra trouble and inconvenience. In a free society not even the Government should have the power to disrupt a man's life and livelihood without full compensation."

A rider could be added to this. No arable land should be destroyed until every alternative has been fully explored by some competent authority. ✓

FLAX—More Profitable

(Continued from page 16)

and dry. No amount of packing or other working will help. It is just too late to think of flax on such a field, unless seeding is to be delayed until the June rains come. Delayed seeding results in lower yields but it is sometimes a useful practice to control certain weeds.

High rates of seeding for flax are best, especially in a dry spring when some seedlings don't survive. Bill McNally sows his flax at about a bushel per acre. At the Regina Experimental Farm, 40 pounds of seed

per acre gave higher yields than 30 pounds when seeded on summer-fallow with a grain drill. The flax growing program of Harold Drew at Estlin, Sask., is particularly interesting. He decides what field he will use, a year before seeding time. Then he keeps that field firm during the summerfallow year. He may even pack his summerfallow in July. Shallow cultivation and a rod weeder help keep fields firm as does controlling annual weeds with chemicals.

Flax can be grown successfully on cereal stubble. While both the grain drill and disk are satisfactory for seeding flax on firm summerfallow, stubble crops are usually seeded with a disk. Flax should not be grown on flax stubble because most diseases overwinter on the straw and will thus attack the new crop.

Flax varieties are susceptible to seedling blight, so treatment with a mercury or captan seed dressing is advisable.

"Bolley," a rust resistant American variety of flax, has been newly licensed for use in Canada. Bolley is resistant to the new race 300 of flax rust which was widespread in Manitoba crops last year and also appeared in Saskatchewan and North Dakota.

At the same time, several outstanding varieties have been removed from the recommended list because of the rust menace. These include Marine, Sheyenne, Army and Cree.

Produced by the North Dakota State University in co-operation with

the United States Department of Agriculture, Bolley was released as a commercial variety in the spring of 1957. It has since become very popular in the U.S. ✓

\$1 Million Grazing Co-op

(Continued from page 17)

Said Ed Nelson of the increased rainfall: "How lucky can you get?"

Future plans call for an insurance fund to protect members from stock losses. The group also hopes to be able to set up a co-operative bull battery and charge users a breeding fee. Waldron lends itself to this sort of enterprise because it has 25 separate fields which would enable the stock to be segregated for age and breedability.

If the spirit of Sir John Walrond Walrond groans at the gross liberties taken with the family name, there is some consolation in the fact the great ranch is still under aggressive private ownership. At least it hasn't suffered the final agony of being turned into a Government-run community pasture. ✓

Sheepmen Bunt Back

(Continued from page 25)

Canadian wool of all grades, from Coarse through to 62's particularly well suited to their requirements. They deplore the shortage of Canadian wool and demand far outstrips the supply in most grades.

G. A. O'BRIEN,
General Manager, Canadian
Co-operative Wool Growers.

Author Replies

The critics of "Wool in Our Eyes" should be complimented for correcting the import statistics used in the December issue of the Country Guide.

However, it seems to me that the revised figures strengthen my claim that we should keep on importing. If imported frozen lamb is so inferior what became of the 37 million lb.? It wasn't used for pet food!

This week, (February 15) Australian and New Zealand lamb carcasses were cut up and sold in Brantford, Ont., priced at 19¢ lb. for fronts and 39¢ lb. for leg and loins. Is this a healthy present for Canada's producers?

A 1960 issue of "The Shepherd" published at Sheffield, Mass., had three pictures showing 42,000 Australian lambs being unloaded in San Francisco from a converted ocean liner. The battery of feeders in a quarantine yard, where they are held for 30 days prior to going out to United States feedlots, clearly proves that this is no isolated raid on North American markets. United States sheep men thought this gave their industry a dubious future.

There are many reasons why our government assistance programs should be continued, but if we are to dispel the doubts of their validity and our right to them in agriculture, they must be used with the greatest of restraint and prudence.

British Agricultural Minister Soames stated in a recent speech: "World conditions, in which we are



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COUNTRY GUIDE

faced with a surplus of supply over commercial demand, put an obligation on all countries to avoid price policies which encourage still greater production at artificially high prices."

Mr. Sicco Munsholt, vice-president of the European Economic Council, expressed his opinion: "Agricultural policies must no longer be considered only in the light of a national context but must fall into the larger framework of international economic policy."

The United States' plans for the Kennedy Round of trade negotiations, outlined by presidential representative Christian Herter, state: "The negotiations on the limits of production for a limited number of commodities, notably cereals, meats and dairy products, may be feasible within the context of international commodity arrangements. Needless to say we should expect such factors as efficiency and relative costs of production to be taken into account."

JIM REVELL

Farm Groups

TAX GUIDE CONFUSION

The Canadian Federation of Agriculture notes that the Department of National Revenue is anxious to clear up any misunderstanding concerning the position of grain deliveries toward the end of last year in the calculation of the farmer's income tax return. It refers to a press release issued by the Hon. John Garland, Minister of National Revenue which states:

"The Farmer's and Fisherman's Guide to assist in the preparation of 1963 T1 General Income Tax returns contains the following paragraph:

"There are two methods of handling grain that is delivered to the elevator. It may be left for storage or it may be sold. When it is sold the amount of the sale must be

reported as income of the year in which the grain was delivered.

"This paragraph was not intended to be interpreted, as it has been by some, to mean that the proceeds of grain which was delivered in one year, stored in accordance with the provisions of the Canada Grain Act and sold in the next year, would be income of the year in which it was delivered. Instead, it was intended to set out what has been the policy of the Taxation Division for many years, which is as follows:

"Under the Canada Grain Act, the operator or manager of a licensed public elevator is required, upon the delivery of each lot or parcel of grain, to sign and deliver to the person by whom the grain is delivered a cash purchase ticket or an elevator receipt. If a cash ticket is issued, a

sale has taken place and the farmer is considered to have received payment at that time. This payment represents income of the year the cash ticket is issued regardless of when it is presented for payment. If, however, the farmer stores the grain for future sale, he will receive an elevator receipt and this is not considered to constitute payment unless and until it is exchanged for a cash ticket."

AFA BRIEF TO CABINET

The Alberta Federation of Agriculture brief to the provincial cabinet called for more economic research in the field of marketing and expressed a view that an independent economic analysis of the effectiveness of the auction method of selling hogs is needed. The brief also dealt with air pollution in the Pincher Creek area, regulations regarding moving livestock along highways, access to highways, cattle rustling, surface rights, the need of more readily available soil and feed analysis, compensation for crop damage caused by game, compensation for losses caused by hunters, and railway crossing safety.

HAYS PRAISES FARMERS

In addressing the annual meeting of the Holstein-Friesian Association of Canada, Hon. Harry Hays, Federal Minister of Agriculture stated that Canadian farmers feed the average Canadian cheaper than consumers in any other country in the western world are fed. "Just 19¢ of

the average Canadian's dollar goes for food," he said. "Only the United States of America can show a lower figure and there the consumer pays it at the other end through subsidy programs that dwarf those of Canada."

Mr. Hays stated that although urban people have the idea that farmers are heavily subsidized, the truth is that only 3 per cent of federal government expenditures go to support agriculture. In the U.S.A. the figure is 7¼ per cent, while in Great Britain, Holland, France, Finland and West Germany the comparable figure averages 8¼ per cent.

NATIONAL MARKETING BOARDS

A request for enabling legislation to establish National Producer Marketing Boards if and when farmers want them is one of the points in the annual brief of the National Farmers Union to the cabinet.

SEES END OF DAIRY SUBSIDY

Speaking to the annual convention of the Manitoba Dairy Association, Mr. J. M. Hartwick, president of the National Dairy Association of Canada, which represents commercial dairy firms in the country, has predicted a gradual end to federal government subsidy for the dairy industry. Declaring that the dairy industry last year experienced the most dramatic transformation in its history — a strong move toward balanced production and consumption— Mr. Hartwick said it was his personal

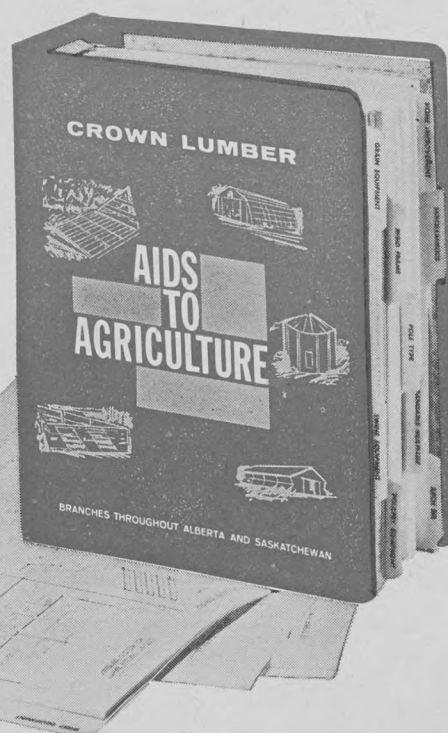
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view that the industry should eventually be able to stand on its own feet.

However, he cautioned that no drastic change in federal policy should be made now. "In the light of past experience it would be a grave mistake to alter government policy in such a manner as to increase the consumer price of butter," he said. ✓

SAFEGWAY CRITICIZED

The decision of Safeway Limited to cancel all contracts but one with egg producers in the Regina area and bring in eggs from Winnipeg instead for their stores in southern Saskatchewan, is merely another step toward vertical integration and complete control of agriculture by processors and distributors, according to Roy Atkinson, president of the Saskatchewan Farmers Union. Mr. Atkinson said that egg producers in the Regina area who have invested capital in their egg producing units and had their contracts cancelled on a week's notice, are now without the particular market for which they had specialized their production. They will now be forced to dump their product on the open market or liquidate their flocks, he said. ✓

ASSETS OF FAME

Farmers Allied Meat Enterprises should remain a theory and its shareholders should consider taking aggressive steps to have their entire remaining assets transferred to either the now-existing First Co-operative Packers at Barrie or the United Co-operatives of Ontario. This is the view of M. L. Tebbutt, president of the Ontario Farmers Union. Mr. Tebbutt states that many members of the OFU who are shareholders in FAME are now becoming concerned with the lack of progress taking place in this meat packing venture. He said that creates a dilemma. If

you allow FAME to die you could retard the farm movement for another generation. If you build FAME you will destroy marketing boards for they both cannot function effectively as separate entities at the same time under existing legislation. ✓

HALF CENTURY CO-OP

The Vineland Growers Co-operative Limited, which is one of the oldest fruit shipping firms in the Niagara Peninsula, has marked 50 years of operation. This growers' organization was incorporated in 1913. Since 1915 the co-operative has recorded more than \$37 million in sales with an operating profit of some \$734,000 including \$521,000 which has been paid back to members of the co-operative in patronage returns. ✓

HELP YOUNG FARMERS

A spokesman for Saskatchewan Farmers Union in referring to the proposed Agricultural Adjustment and Development Act in the province expressed hope that it will provide new credit facilities for young farmers trying to get established on their own farms. He also suggested that new measures to promote more intensive farming would be welcome. ✓

PUBLIC HEARINGS ON HOG BOARD

The chairman of the Saskatchewan Hog Producers Provisional Marketing Board, Jack McCloy, has welcomed the announcement of the Saskatchewan Marketing Board that it will hold seven public hearings in March on the proposed Hog Producers Marketing Board. Said Mr. McCloy, "This will give all farmers in Saskatchewan an opportunity to present their views on hog marketing and enable the SMB to assess their feelings." ✓

the Ontario and the Federal Departments of Agriculture are involved in the production and marketing of tobacco.

I am writing to Ottawa for complete information on the subject and I trust other readers will do the same.

This sort of thing should be stopped. Tobacco is being treated as one of our essential agricultural crops which of course it is anything else but. The Department of Agriculture and the Department of Health are frustrating each other on the tobacco question, at the taxpayers' expense.

H.H.,
Langdon, Alta.

Enjoys Guide

We would like to let you know how much we enjoy the Country Guide. Especially are we grateful for the religious column "Let's Think It Over."

MR. & MRS. D.L.R.,
Grainger, Alta.

Walking High!



I thought this picture of our two boys walking on stilts might be interesting to Country Guide readers. The boys are David and Hughie Little.

MRS. OSWALD LITTLE,
Lakefield, Ont.

Mystery Man

You have such a Christmassy picture on the December issue, I have looked at it many times. Then just inside I notice you have the names of the people. But why omit the name of the young man who is sitting next to the grandmother and almost obscured by the carver of the turkey?

MRS. J.K.M.,
Bergland, Ont.

Un-named was Kenner James, who is an agricultural student at the University of Manitoba.—Ed.

No Six-Month Milkers

The advice given by Agriculture Minister Hays to dairymen to milk cows only in the summer and let them go dry during the winter is open to question. The suggestion is supposed to help us cut costs in producing milk. I doubt if it will. Here's why:

- (1) Cows bred along modern techniques will and must milk longer than 6 months per lactation.
- (2) While the cost of winter production is admittedly higher, it

can be lowered somewhat by making quality hay.

- (3) There is more time in the winter to milk cows and to start calves than in the summer.
- (4) With ever increasing taxation at all levels of Government the farmer cannot afford to let the cows go dry half the time.

The farmer is not the only one involved either. Many truckers render a useful service delivering milk to the plants. Year round production enables them to make better use of their trucks and personnel. As well, the manufacturing plants would be put in an impossible position if 1 year's production were delivered inside 6 months during the pasture season. This would demand double the personnel and plant facilities in the summer, with all the labor and investment lying idle half the year.

I have come to the conclusion that the solution to the problems of the manufacturing milk producer are not as simple as Mr. Hays suggests.

L.H.,
Dorchester, Ont.

Likes Small Farms

Peter Lewington's article, In Praise of Grass in the February issue, is proof of this writer's qualifications. It would be interesting if Mr. Lewington were to develop the idea expressed by Arden Baker who believes that if a livestock program works well, it will not necessarily work better if it gets bigger. The late Hon. James Gardiner in one of his last public speeches, said he never knew a large farm operation in the West to be successful.

H.B.N.,
London, Ont.

Foisted Lamb

The letter from R.B.B. on lamb would be amusing were it no so pathetic. We also have bought alleged lamb in many places in B.C. including "leading chain stores in Burnaby." We would be pleased to pay the premium prices charged if we could only get Canadian lamb. While the grower continues to foist yearlings on the market, we must as protection purchase that which is honestly labeled for what it is, spring lamb, New Zealand product.

Let the sheepmen give us good Canadian spring lamb, animals under 6 months, and New Zealand imports need not worry them at all.

A.S.H.,
Vancouver, B.C.

Challenges Barager

I accept Mr. C. P. Barager's challenge to pick off crows more consistently at a greater range (300-400 yd.) with a .243 Winchester, than he could ever hope to do with a .222 Remington.

My conclusion is based on the greater retention of velocity of the .243 which results in more energy (ft.-lb.) and a flatter trajectory at more than 300 yards. The .222 at 300 yards has 340 ft.-lb. energy and

(Please turn to page 100)

Letters

Pot Hunter

I read the letter of H.O.J. of Alberta Beach. In my early days I have been with hunting parties shooting in the woods around Tintern Abbey in Monmouthshire. To shoot a bird not on the wing was an unpardonable offense. I cannot recall having seen it done by any member of the various parties I was out with. In partridge season when walking through the stubble fields, should you flush a covey, each man was supposed to take his outside bird.

One time I saw a young man raise his gun to a running bird, but he was immediately told never to shoot at a running bird. He replied he was waiting until it stopped. This would be the kind of sport H.O.J. advocates but I can assure him he would not be classed as a Sportsman but a Pot Hunter.

Pheasant shooting came later and I dearly love to recall those days. The white-coated beaters with their short staves going through the woods tapping the trees to send the pheasants ahead to where the

shooters would be stationed in small clearings.

The whir of wings above the high tree tops, the sharp report of guns, the falling birds, the pride of good marksmanship. This is sport and the shooters are sportsmen in the proper sense of the word.

So different to crawling upon some poor unsuspecting bird or animal and murdering the poor beggar without giving it a chance for its life.

Yours for true sport.

H.O.,
Langruth, Man.

Saves Recipes

I am married 40 years now, and as far as my old memory will, or can think back, I have always kept the recipes that came in each issue. I tried a lot of them, and they turned out very well.

Mrs. B.D.,
Kipling, Sask.

Tobacco Not Essential

I was shocked to read "Report on Tobacco Sales" in the December issue and realize the extent to which

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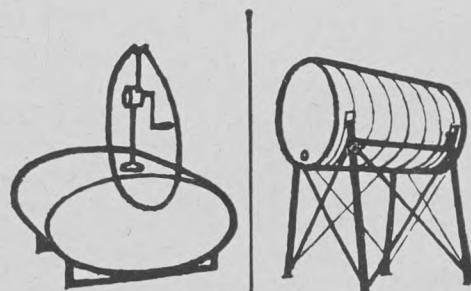
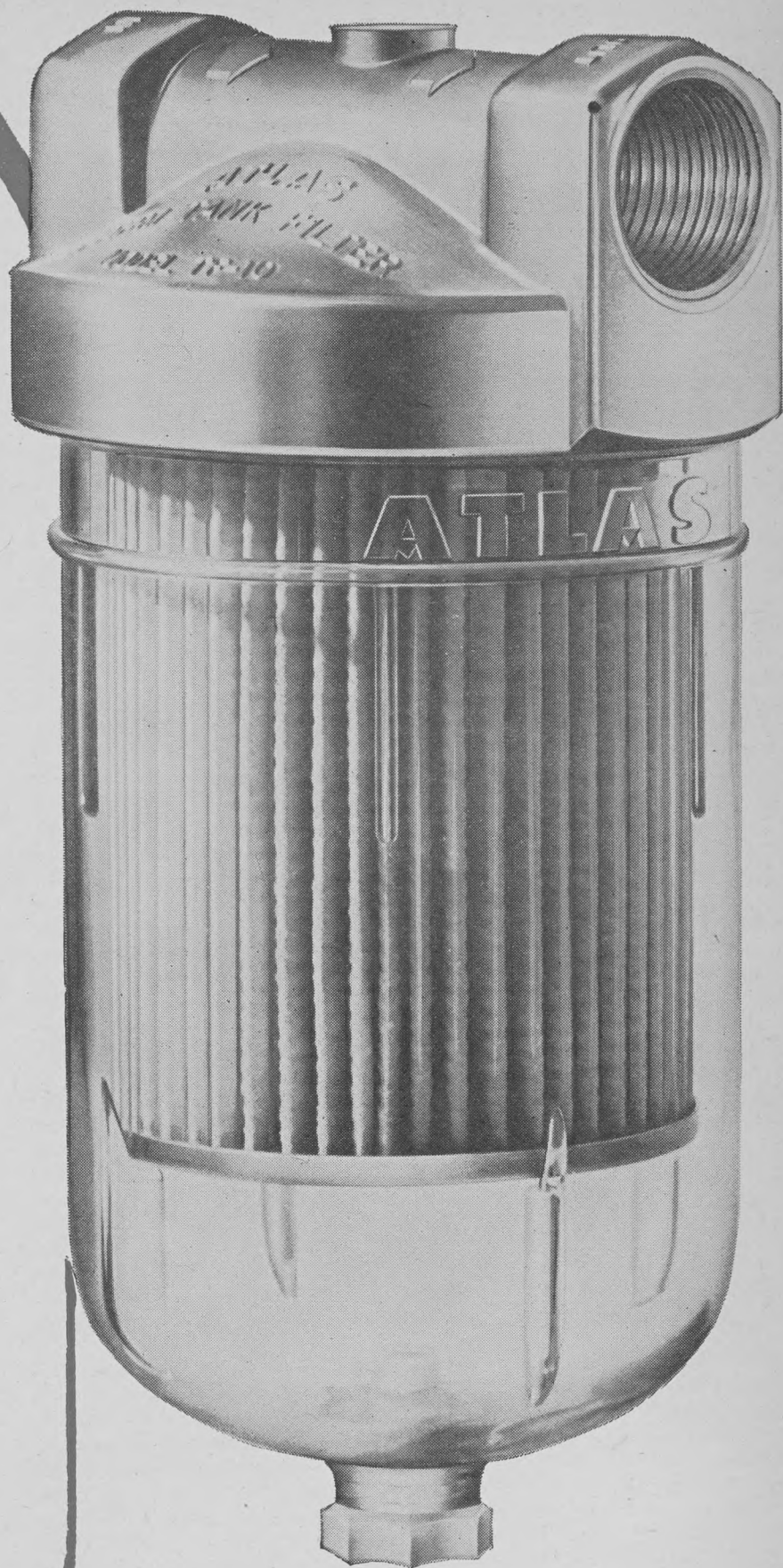
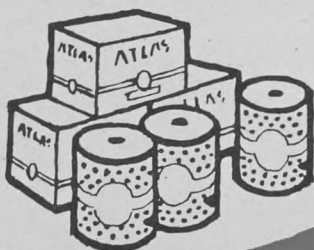
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(Continued from page 98)

a mid-range trajectory of 7 inches. The .243 on the other hand, has 3 times this energy (1,030 ft.-lb.) and a mid-range trajectory of only 4.7 inches. Further, at 500 yards the .222 bullet drops some 94.5 inches. Just try and sight that in with a scope.

As for wind drift, the .222 has more of a problem than the .243 or larger bullets ever will have.

The average .222 should shoot accurately out to 225 to 250 yards. The average .243 should shoot accurately to 300 to 350 yards under similar conditions.

As far as the .222 Remington not being a deer cartridge, as you state in the November issue of the Country Guide, this is a lot of hog-wash. Likely 95 per cent of all deer shot in Canada were gotten at less than a steel-tape measured 250 yards (no typewriter measurements allowed).

Further, I defy any person or persons to conclusively prove that the 44-40 is superior to the .222 using proper bullets at any range.

By the way, this includes game officials and, in particular, politicians who make our game laws in Saskatchewan and elsewhere, allowing such cartridges as the 25-20 Winchester, 32-20 Win., 38-40 Win., and 44-40 Win., while at the same time prohibiting the use of the .222 Rem. among others.

No one will or can prove that the .222 Rem. is not equal to the 44-40 because a quick one-shot kill is the result of two things: first, proper bullet placement, and second, proper bullet action.

As for the .243 being a deer rifle only, well as any handloader knows who has tried it, the Nosler partition bullet makes a .243 a real moose getter.

J.G.,
P.O. Box 435,
Prince Albert, Sask.

Sitting Ducks?

Re the letter "Shoot to Kill," in Britain we referred to such people as "Pot Hunters" and as such they never received a second invitation to a "Shoot."

If a hunter prefers his ducks "sitting," why the "decoys"? Why not use the decoys, and shoot to kill? If one does not give the game a chance there will be no game for the next generation!

E. H. TUDOR,
Morningside, Alta.

Surplus Kills Profit

I have read, with interest, "One Man Hog Farm," by Peter Lewington in the November issue. This article may encourage larger hog operations which no doubt will have some effect on Mr. Wiens' profit outlook for 1964.

The average weekly marketings in Canada for January and February of 1963 were 122,500 hogs per week, and the national average price was \$29.22 for the same period. Our domestic needs are about 129,000 hogs per week. In March of 1963 marketings averaged 131,000 per

week, and the national average price was about \$25.22.

Now if we say a market hog weighs 160 lb. average, and take 1 week's marketing for January and February of 122,500 at \$29.22 we come up with \$5,726,875.

Now take a week's marketing for March of 131,000 at \$25.22, we come up with \$5,285,850, a loss of \$441,025.

We find the extra 8,500 hogs were given away plus \$51.88 a piece to find someone to give them too. It is quite possible to produce oneself right out of the profit picture regardless of the type of operation.

B.B.,
Renwer, Man.

Can't Store Cows

Hurrah, Hurrah, the dairy farmer is getting rich and can curl besides!

The Hon. Harry Hays, Minister of Agriculture, states in the January issue that a farmer can cut the cost of milk production by 75 cents per 100 lb. of milk by having the cows freshen in the spring and drying them up when cold weather comes. He seems to say, store her away during the winter and only provide a minimum of shelter along with just enough feed to keep her going. Then the farmer can go curling or do whatever he likes instead of choring around all winter, the uneconomical way.

But what would Mr. Hays say if dairy farmers were scrubbing the city streets with milk during the hot summer while people are busy around the lakes with boating, fishing, etc. People would use soft drinks instead of milk during the summer and then when they run short of milk in the winter, milk would have to be rationed.

If we store old Bossy in a shelter with just a low maintenance ration, a few "how-do-you-do's," or "we'll see you in the spring," this could lead to some more catastrophies. How long would she be there if we neglected giving her a good balanced diet? How would she produce a healthy calf and be ready to produce all this profitable summer milk?

Don't forget that in the summer a farmer is too busy doing work in the fields and he hasn't time to break in new heifers for the milking string.

I advise leaving curling to the professionals and not to dairy farmers in the wintertime.

A.N.
Arthur, Ont.

Can't Compete

I read with dismay the article "Wool in Our Eyes," by Jim Revell.

Our gross national export to both Australia and New Zealand is infinitesimal when compared with the dumping of their lamb and mutton in this country and the consequent damage to our Canadian sheep industry. To suggest that their frozen product is every bit as good as our home grown lamb, is like saying that bloater roe is the equivalent of caviar.

He discourses at length on sweaters and carpeting. I spend a lot of my time out in sub-zero

weather and, from bitter experience, I know that nothing takes the place of wool in cold weather.

I understand that both Australia and New Zealand have plans to eventually produce everything we are exporting to them and I wonder what Mr. Revell is going to offer as a remedy for the bankrupt western producer.

They can raise a steer for a whole lot less cost in Australia, therefore are you going to suggest that we cripple our economy in order to keep the Australian economy healthy. Furthermore, does Mr. Revell believe that Australia would let us sell our surplus wheat on its domestic market to the detriment of wheat farmers there, in the same way they are dumping their surplus mutton on our market, without protest, for the sale of a few locomotives or turbines.

M.A.V.,
Brooks, Alta.

Anti-Marketing Board

In commerce as well as in religion and politics, a country offering its citizens responsible individual liberty must have open (which means freely competitive) institutions. Those institutions must afford patrons freedom of choice to support or refuse, every time they act. A



Hi FOLKS:

"The trouble with this country," said Ted Corbett one day, "is that everybody knows where they came from but nobody knows where they're going."

"What do you mean by that?"

"Well sir, part of the population yearns to be English, another part insists on being French and some hanker to be Americans. Any new people coming here get mighty confused because they can't find a peg to hang their identity on."

"You mean we need an official anthem and a flag?"

"More important than that," he said solemnly, "we need a culture. What the dictionary calls 'the sum total of ways of living built up by a group of human beings.'"

"We have a sort of way of life," I pointed out, "and at least one of us in this room is human."

"That's the point," he said eagerly, ignoring the sally, "we've never tried to sum it up. In fact, we haven't got anybody who can put his whole time to finding what the total comes to."

From his pocket he fished out a newspaper clipping and handed it to me. It was about some professor

free country doesn't need (indeed must not permit) plebiscites to decide where, how, and when, its responsible citizens must sell or buy producer or consumer goods; or what church they must go to, or the political party they must join or support. These freedoms pertain to freedom of association and should be guaranteed and assured by Law No. 1 of this, our beloved land.

Compulsory marketing boards and their end-result, compulsory communalism for agriculture, is surely not the answer we Canadian farmers are looking for.

J.L.O.
Barrhead, Alta.

Barnacle Bill

We are very fond of the Guide and find many useful things in it.

Your readers might be interested to know that our little girl Deborah, age 6, has a riding cart and she is pulled around in it by her big black Newfoundland dog, Barnacle Bill, who weighs 175 lb. These dogs are still on the rare list and are wonderful pets for children. They are never mean or aggressive. They have webbed feet and are noted for life-saving and water rescue work.

W.F.C.,
North Surrey, B.C.

who was suggesting that the Government appoint a completely new type of cabinet minister — a Minister of Culture, no less.

"You can't put in culture like you put in a potato crop," I scoffed. "A forced culture is as phoney as a forced laugh."

"These are changing times," he said. "The Government is doing new things all the time."

"If they do that I'll shoot myself," I told him, "because I'll figure I've seen everything. And they wouldn't stop at that, no sir. You couldn't have a Culture Minister without having a deputy minister, an assistant deputy, and so on down the line. First there would have to be a new \$10 million Culture building and this would cost \$20 million before it was finally put up. We would see such things as the Canada Department of Culture, Painting, and Sculpturing Division, Abstract Art Branch, and each would be as full of people as a beverage parlor on a Friday night. It would cost \$100 million."

"What's \$100 million?" he scoffed. "You want to be careful," I warned, "I remember a politician who only said 'what's a million?', and he lost his job."

Sincerely,
PETE WILLIAMS

COUNTRY GUIDE